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REYDON CHURCH, SUFFOLK.

From a sketch by MR. ARTHUR KEEN, F.R.I.B.A.

MEETINGS

FRIDAY, *January* 12.

Institution of Structural Engineers (*Midland Counties Branch*). Mr. Gower B. R. Pimm on "Foundations—with special reference to the work of the Piling Panel of the Institution." At Birmingham. 6.30 p.m.

Royal Academy of Arts. Professor W. G. Constable on "English Art and English Life." At Burlington House, W.1. 5 p.m.

SATURDAY, *January* 13.

Scientific Society of the Glasgow Royal Technical College. Mr. W. Gemmell on "Stainless Steels." 7.30 p.m.

TUESDAY, *January* 16.

North Staffordshire Architectural Association. Annual Dinner. At the North Stafford Hotel, Stoke.

College of Estate Management. Mr. W. T. Creswell, K.C., on "Procedure and Evidence in Arbitrations under Statutes." 5.30 p.m.

WEDNESDAY, *January* 17.

Royal Society of Arts. Mr. J. M. Waldram on "Modern Developments in Street Lighting." 8 p.m.

Electric Lamp Manufacturers' Association. Mr. W. J. Jones on "Lighting Principles and Economics." At 2, Savoy Hill, W.C.2. 7 p.m.

Clerk of Works, Building and Civil Engineering Foremen's Association of Scotland. Mr. John Wilson on "Building Research." At the Heriot Watt College, Edinburgh. 8 p.m.

University College Lectures. Professor T. Borenius on "English Mediæval Art: Some Points of View." 5.30 p.m.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "English Mediæval Architecture: Plans, Vaults and Butttresses." 6 p.m.

Institution of Civil Engineers. Mr. E. L. Leeming on "Transition Curves and Super-Elevation on Roads." 6 p.m.

THURSDAY, *January* 18.

Institution of Structural Engineers. Major Alan Moncrieff on "Portland Cement Specifications." 6.30 p.m.

Southern Counties Federation of Building Trades Employers. Annual General Meeting and Luncheon. At the Connaught Rooms, W.C.2. Luncheon 1.30 p.m.

Institution of Structural Engineers (*Yorkshire Branch*). Mr. W. C. Cocking on "London Building Act of 1930 and its Effect on Structural Design." At Leeds. 7 p.m.

Institution of Welding Engineers (*North-Eastern Branch*). Mr. W. Watson on "Eye Protection in Welding." At Newcastle-on-Tyne.

FRIDAY, *January* 19.

Royal Academy of Arts. Mr. Martin Hardie on "British Water-colours." At Burlington House, W.1. 5 p.m.

Royal Sanitary Institute. Discussion on "Town and Country Planning," to be opened by Mr. Percy Morris. At the Town Hall, Wakefield. 5 p.m.

London Society. Mr. Nigel St. V. Norman on "London Air Terminal." 5 p.m.

Hampshire and Isle of Wight Architectural Association. General Meeting and Public Lecture. At Winchester. 6.15 p.m.

Institution of Welding Engineers (*Midland Branch*). Mr. H. Martin on "Fusion Welding of Copper." At Birmingham.

MONDAY, *January* 22.

Royal Institute of British Architects. President's Address to Students and Presentation of Medals and Prizes, 1934. 8.30 p.m.

Institution of Structural Engineers (*South Wales and Monmouthshire Branch*). Mr. G. E. Cooper on "Cinema Construction in Steelwork." At Cardiff. 7 p.m.

Goldsmiths' Company's Lectures. Messrs. Omar Ramsden and Bernard Cuzner on "The Design and Application of the Plastic Arts to Gold and Silver." 7 p.m.

AN OLD HOUSE AT BROADWAY.

From a Pencil Drawing by MR. A. C. FARE, A.R.I.B.A.

FACTS AND THEORIES OF THE PAST YEAR

ALTHOUGH the activities of the architectural profession and the Building Industry during the past year have not involved any new problems or settled any old ones, the year has provided a full measure of interest and anxiety to all. It has been a period of development of problems, both national and professional, which have had their origin in the past. Though there are hopeful indications that the great industrial depression from which the nation has suffered for so long and which has affected so seriously the Building Industry, is surely if slowly lifting, the effect of the War has still to be reckoned with, and the solution of international difficulties caused by that great tragedy has yet to be discovered. In 1915, we ventured to remark that we should pass through three stages after the conflict—(1) a period of serious dislocation of trade, causing much unemployment; then a period of great trade activity; and lastly a long period of trade depression. We are still in the long period of depression, though happily we appear to be emerging from it, and the extent to which this is true must be the measure of our hope for the future.

The long period of depression has affected all trades and professions, though those represented by the great industry of building have, on the whole, probably had a better record of work and activity than most other major industries, and would have had an even better record but for the economy policy of the Government. We have all understood and appreciated the call for reasonable economy, but what national economy has meant to the building industry our readers know only too well. However justifiable that policy in general application was in 1931, its application to the Building Industry was, in our opinion, always doubtful, and its continuance is in every way to be deplored. We are glad to note the growth of responsible opinion in favour of a change of policy and especially the views of the *Economist*, that "Neither this nor any other Government could have any reason or excuse for delaying any longer in adopting an expansionist policy at home. When a Government's financial credit is high, and prices and production are definitely on the turn, there is good reason to expect such measures to succeed and little ground for thinking that they will have disadvantageous secondary effects. Even if there were valid arguments against a forward policy in 1931, they are certainly invalid to-day. While the crisis is over and the depression remains, the Government apparently prefers to retain its belief in the crisis and complacently to ignore the depression." This expresses the views of the Industry, and has not only been expressed by this journal again and again, but has been consistently advanced by the Building Industries National Council. All interests concerned have faced the responsibilities and difficulties arising out of the Government policy and the great trade depression in the right spirit and will continue to do so, but they ask that a policy which has a hampering effect on trade generally shall be drastically modified, if not abandoned, and that encouragement should be given to municipal bodies and others to proceed with the public and private works delayed in consequence of the national policy.

Though the outlook is still obscure, the national position to-day is far better than it was a year ago, and under right direction the rate of progress would undoubtedly increase. The new Unemployment Bill of the Government appears to extend the responsibilities of the State, and we may question again the wisdom of keeping in permanent unemployment large bodies of workers at a heavy cost to the State and taxpayer, and in consequence a reduction of spending power and less work.

We do not know what else could have been expected from a policy of abandonment or postponement of public and private works but an increase of unemployment, and while much has been doneto relieve individual distress resulting from loss of work, the year has been a hard one for the professional classes, whose future very much depends on the national policy. The abandonment or postponement of public and private work has a demoralising effect on all classes, which is only partially alleviated by the relief provided by various societies and individuals, but we are glad to know that much has been done, and is still being done to assist those who have lost their means of livelihood.

A measure of considerable importance to the Industry which became law during the year was the Housing (Financial Provisions) Bill, the objects of which are known to our readers, and which we refer to in our article on the Trend of 1933. This and the Unemployment Bill, which is now before Parliament, are measures which represent a genuine attempt to solve two very difficult problems. The proposals of the Unemployment Bill are still before Parliament, and will, no doubt, be as keenly debated as were the Town and Country Planning Act, which came into force during the year, and the Housing (Financial Provisions) Act.

A matter of more particular interest to architects is the Architects (Registration) Act, which is now an effective Act. While the Act does not protect the title "architect," a large number of practising architects have registered, and those who have not done so will, if they desire to call themselves "registered architects," have to satisfy the Council that they have passed an examination recognised by the Council. Other matters of interest to the profession during the past year have been the founding of an Institute of Registered Architects, with Sir Edwin Lutyens, R.A., as President, the commencement of the building work for the new R.I.B.A. premises in Portland - place, and the appointment of architects for the new Government buildings in London and Edinburgh. The age limit condition imposed by the Government in the selection of the names of those who were considered for these great buildings was the subject of much discussion in the profession, but the selection of Mr. Vincent Harris, the successful architect in the 1914 competition for the Whitehall buildings, although past the age limit imposed, disposed in a large measure of the objection we made at the time to the imposition of such a condition, though we may add that we hope such a condition will never again be made in any architectural competition.

Trade depression and the problem of monetary stringency have their effect on architecture, but, notwithstanding this, some notable buildings, to which we refer elsewhere, have been erected during the past year, and important new buildings are to be erected during the present year. The discussions on the question of traditional or "modern" architecture still go on, and to the general public these discussions must be somewhat confusing. We think the heads of the profession might take a more definite and thus useful part in this conflict, and by their influence remove the impression that the profession is sailing without a rudder or without direction. What we should consider is whether architecture is a great art or a matter of formulæ. All that seems certain for the time being is that building will go on and whether or not we are witnessing a passing phase, time will show.

The future must always be uncertain, but we can say with confidence that what is wanted above all in the architectural profession is unity. In the Industry as a whole we find unity and the advantages are obvious, but the apparent lack of agreement and a common purpose in the profession is to be deplored. We need to be organised to the best of our ability, and to pull together for the good of architecture and building if the public is to receive our best services.

NOTES

1934.

In looking forward to what the New Year may hold of promise, and in endeavouring to estimate the permanence of the improvement seen in trade and employment at the present time, it is perhaps as yet too early to know where we stand. If the foundations are to be secure we have to free our minds from the old outlook—the pre-war mind. To rest on old experience alone at such a time were to promote the very evils from which we seek to free ourselves to-day. The old anchorage is gone and we sail, in one sense, as yet uncharted seas, in economics, social outlook and political endeavour. Architecture feels this disturbance from tradition, from custom and what has gone before. We may have been too long fastened to the classical and mediæval tradition, swaying unsteadily between the classic and romantic, and the past is in a sense on its trial, tested against our own present needs. Ought we, therefore, to regard this but as a sign that our civilisation has outlived itself—is the progress one of decay only? Or are we but shedding the old vesture of thought and action now become outworn? Little thought is needed to realise that far from this, what is happening is liberating us for the emergence of once more vital expression resting on itself. Some of us would fear democracy as tending to efface the individual to the level of the mass, yet the best interests may be very badly served through individual assumption and pretension. Great periods have always been those of collective mass conviction inspired by an outlook held in common. Surely it is the best thing in the world that we should, as a nation, share the same thoughts when they are right ones, avoiding excess on one side or the other. It is because in architecture and the other arts we may be approaching an expression more genuine and more interpretative of our own time, that the New Year holds out a promise of more united co-operative effort based on the perception of what we are feeling to-day and the expression of that feeling.

Registration.

The letter which we publish on page 87 from the Presidents of the three senior societies representing respectively the Chartered Surveyors' Institution, the Land Agents' Society and the Auctioneers' and Estate Agents' Institute of the United Kingdom, is an interesting document which embodies a great deal of common sense which will, no doubt, appeal, as it should, to the members of the societies concerned. The councils of the three bodies, after careful consideration of the facts, have reached the unanimous conclusion that any measure which Parliament is at present likely to grant for the regulation and control of these professions "will on balance bring no benefit either to the public or to those professions." In the course of their letter the writers mention that "The architectural profession, after five years of effort obtained in 1931 a Registration Act which is purely permissive in character and prevents nobody, qualified or unqualified, from practising as an architect. Registration on this voluntary basis would appear to afford no protection to the public. The recent history of registration in so far as it affects professions other than those concerned with the care of life and health, points to the difficulty which faces the Legislature in granting anything approaching the powers which are required for proper and effective control." Any congratulations which are due to the Councils of the three societies on their decision must be tempered by the reflection that their conclusions have been reached in the light of a full knowledge of the difficulties the architectural profession experienced in their attempt to secure protection.

The Royal Gold Medallist.

The announcement made by the President at Monday's meeting of the R.I.B.A.—that the Council is to submit to His Majesty the King the name of Mr. Henry Vaughan Lanchester as a fit recipient for the Royal Gold Medal for 1934 will be greeted with satisfaction and pleasure by Mr. Lanchester's brother architects. All will feel that he is a worthy recipient as one of the leading planners and designers of our day. A list of his firm's buildings which included only the Cardiff City Hall and Law Courts, the Central Hall, Westminster, the Beckenham Town Hall and the Church of Christ Scientist, Mayfair, would alone mark Mr. Lanchester as a worthy choice, but his executed works by no means mark the sum total of his achievements and work on behalf of the profession. To them must be added a great volume of educational and advisory work and the fact that he was one of the founders of modern town-planning in this country. At the present moment he and his partner, Mr. T. A. Lodge, are engaged upon the erection of the great Hospitals Centre, Birmingham, and the University of Wales, at Aberystwyth, so that we may soon hope to see further examples of his art. We would add our personal congratulations in view of the fact that Mr. Lanchester was at one time Editor of *The Builder*.

The Government Buildings, Whitehall.

The appointment of Mr. Vincent Harris as architect for the great block of Government buildings to be erected in Whitehall has been followed by the publication of a good deal of descriptive comment on the architect's proposals, much of which can only be conjecture, as the plans for the building have not, of course, been prepared, nor will they be for many months to come. It was only

SEVENHAMPTON CHURCH, GLOUCESTERSHIRE.
From a Sketch by Mr. ARTHUR KEEN, F.R.I.B.A.

ST. LAWRENCE GATE, DROGHEDA.

to be expected that public interest would be shown in this great undertaking and that the inevitable criticism would follow, and for this we have not had long to wait. Captain Swinton in a letter to *The Times* last week tells us that "the architect wishes to build to the pavement of Whitehall and, however fine his architecture may be, that lowers our unique Whitehall to the level of an ordinary street. And—horror!—he announces that his building is to be ten stories high." However that may be, such criticism is obviously premature and probably quite inaccurate.

Scientifically Planned Structures.

THE thoughtful if somewhat combative article by Mr. H. B. Bryant, Secretary of the Building Industries National Council, which we publish this week is a call to the Industry to extend the knowledge which well-informed people possess of the important part the building industry, properly employed, could take in national prosperity, especially in the provision of well-planned houses and factories which would not rapidly deteriorate as such buildings of the past have done. In the course of his article, he says: "The building industry is equipped to provide the scientifically designed and planned type of industrial and commercial structure that has proved so effective as a means of industrial resuscitation in other countries of the world. The building industry should see that its powers and uses as an agent of industrial rehabilitation in this country are not checked by the short-sighted policy of those other interests which should be the first to use the powers of the building industry in their own and the country's need and well-being."

The R.A. Exhibition of British Art.

NEVER before has such an opportunity occurred to view, under one roof, a collection of British art such as that which is now to be seen at the Royal Academy. Exhibitions of Dutch, Italian, Persian, and French art have been seen there, and now we have British work covering some nine centuries. Whilst one is familiar with many of the exhibits from their reproductions, and in the public galleries, we now have brought together these and many works from private collections, including the King's, which are seldom or never seen by the general public. This is an opportunity for seeing these fine works which may never occur again, and it behoves those who are interested in art generally or any particular branch of it to take advantage of it. It can be truly said that English art has a robustness and vigour in its execution which typify the English character. This especially applies to the works of Hogarth, Reynolds, Gainsborough, Morland, Romney, Constable and others, and, of the water-colour men, to David Cox, Cotman, John Crome, and Girtin, to mention but a few. Quite a number of sporting pictures are to be seen, a branch of art which for a long time has been neglected, but which at the moment is very much the vogue or fashion, judging by the high prices such works fetch even in these days.

Technique.

IT is of much interest to compare the varying styles or technique of the painters—the broad handling of certain of the 18th century artists with that of 19th century men, notably that of Ford Maddox Brown, Holman Hunt and others, whose work is microscopic in finish. Craftsmanship is represented by fine examples of furniture, the work of the silversmith, and embroiderers. The Royal Academy is to be congratulated on the gathering together of such a collection of the work of British artists, and thanks are due to the owners for lending their treasures for exhibition. No doubt the art-loving public will take full advantage of this opportunity to visit an exhibition of rare interest. It will remain open until March 10.

CLOCK GATE, YOUGHAL, CO. CORK.

From water-colour Sketches by PROFESSOR A. E. RICHARDSON, F.S.A.

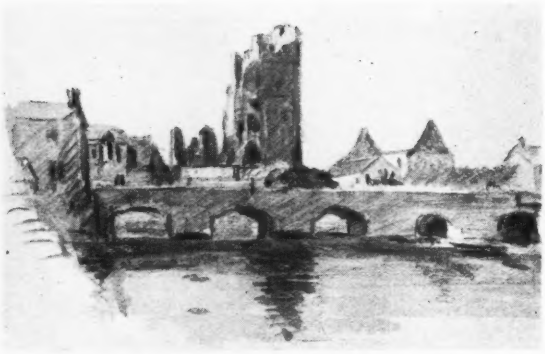
(See pages 48 & 49).

A Novel Competition.

THE increasing attention which is being given to town planning and the proper lay-out of towns and building estates, is welcome evidence that the general public, as well as public authorities, realise the importance and value of the proper planning of traffic routes and open spaces and the most suitable disposition of public buildings. The town planning legislation of recent years, especially the Town and Country Planning Act, which came into operation last year, has done much to stimulate interest, and in our last issue we published the successful designs for the replanning of Stockholm and the layout of a building estate at Penylan, Cardiff, and in our next issue we hope to publish the conditions of a novel competition for a Village layout, which should afford scope for the enlightened imagination of architects and town planners who are at the same time fully alive to the needs of the community.

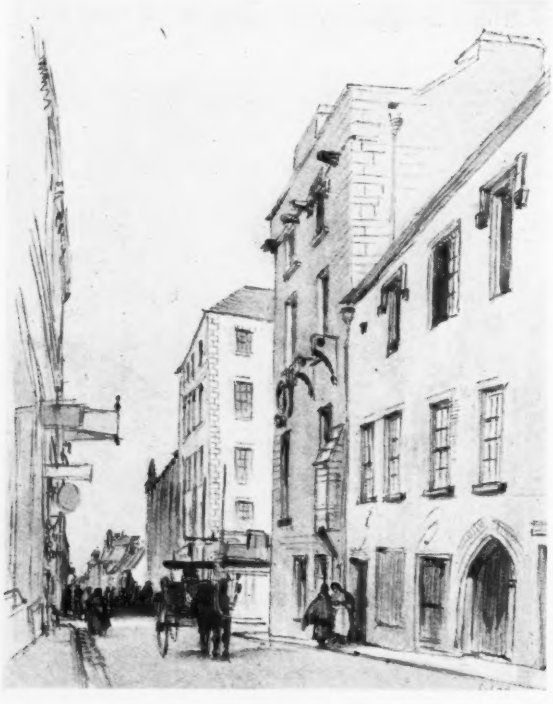
Is Art Decadent?

WE think many of our readers will agree with the remarks by Dr. Barnes, recently reported in a contemporary: "Much modern culture," he said, "is marked by its offensive distortion of the human figure. There is no need to emphasise the negroid element in popular music. The new architecture excels in the ugliness that ferro-concrete can achieve. Some modern portraits to me, at any rate, suggest the licentious mental deficient." It is doubtful if much of present-day work in architecture, sculpture and painting is of a lasting character, but the test of a few years will prove this, one way or the other. The pendulum appears to have swung from unnecessary features and senseless decoration to extreme boldness in architecture, and crudity in sculpture, and painting. We are, however, glad to say that signs are apparent that from the experimental stages which we are going through in architectural design a greater sense of proportion, material, texture and colour, with a discrimination where decorative features are used, is emerging. This is noticeable in the drawings receiving prizes at the exhibition of students' prize drawings now on view at the R.I.B.A.



DESMOND CASTLE, ASKEATON, NEAR LIMERICK.

LIMERICK CATHEDRAL.



LYNCH CASTLE, GALWAY CITY.

Three water-colour Sketches by PROFESSOR A. E. RICHARDSON, F.S.A.

(See pages 48—49.)

Town-Planning Green Park.

THE news that the L.C.C., in conjunction with the Commissioners of Crown Lands, have prepared a scheme for town-planning the area situated between St. James's-street and Green Park, has been received with some interest and not a little discussion. The reason for this step, it is learnt, is the proposal to rebuild a site in Arlington-street, overlooking the park, as a high block of flats. The Commissioners state that the Crown Lands Advisory Committee have "expressed the opinion in effect that the rebuilding of this one house could only properly be considered in relation to the development of the adjoining property." The Commissioners also state that "the planning of this relatively small area is considered to be a matter of urgency, but it is hoped that in the near future schemes will be prepared for similarly safeguarding the amenities of all the London parks."

THE TREND OF 1933

The General Situation.

THE year which has just closed may be said to have been one of all-round progress so far as architecture and building are concerned. Unemployment in the profession and the industry diminished considerably. Exact figures relating to the profession are not available, but it is understood that the improvement in employment among architects' assistants is somewhere in the neighbourhood of 50 per cent., as compared with the end of 1932. In the building industry at November, 1932, unemployment stood at 224,574; a year later the figure had fallen to 147,356—a decrease of 77,000. Since then there has been a slight increase. Unemployment in public works contracting is still, unfortunately, very heavy—47.5 per cent.

Following the improvement in the general industrial situation of the country there has been a considerable increase in the volume of building work. The economy policy of the Government, which has been a main cause of the depression from which we are now slowly recovering, though it has not been officially abandoned, shows encouraging signs of relaxation. There has been an apparent increase in public works undertaken by local authorities in various parts of the country, and the recent schemes for great new Government buildings in London and Edinburgh may be taken as evidence that works of public character are no longer officially regarded as a wasteful extravagance. For the improvement which has taken place, due credit must be given to the activities of the Building Industries National Council, which was founded in the early part of 1933.

Some Controversies.

Every year seems to produce some special controversies of its own, and in the past year the proposal to demolish and rebuild Carlton House-terrace aroused more public interest and opposition than perhaps any other recent case of this kind, except that of Waterloo Bridge. Happily, the proposal was abandoned (at least for the time being) as the result of a well-organised agitation, and the powers of the Commissioners of Crown Lands to do as they might think fit with semi-public property of national importance have been rightly curtailed by the appointment of an Advisory Committee to watch over their activities. The problem, however, remains, and will have to be dealt with. While no one who has any regard for our architectural inheritance can contemplate with anything but regret the disappearance of such buildings as Carlton House-terrace, it is not practicable nor desirable, in many cases, merely to preserve them as "museum pieces." Unless they are made to serve some useful purpose, it is difficult to justify their continued existence to those of a vandalistic turn of mind. Many suggestions have been made for the re-vitalising of Carlton House-terrace, and it will be interesting and instructive to see how the problem is finally solved.

In another project of a somewhat similar nature—the proposed demolition and rebuilding of the Adelphi—protest was of no avail, and the Adelphi Estates Bill was passed through Parliament. The eventual disappearance of the Adelphi will be widely regretted, as much by the topographer, the historian and the lover of old London, as by the architect who values the Adelphi as a unique work of the Brothers Adam. All that can now be done in this case is to see that whatever building is ultimately erected is worthy of the site and properly related to the general sweep of the Embankment.

Waterloo Bridge.

1933 will at least be memorable for the settlement of the Waterloo Bridge question by the adoption by the L.C.C. of a scheme of reconditioning and widening by corbelling-out, to the designs of Mr. G. Topham Forrest, Architect to the L.C.C., in collaboration with Messrs. Rendel, Palmer and Tritton. The case of Waterloo Bridge is a triumphant vindication of those architects, public-spirited laymen and others, who so persistently advocated the retention of this bridge, which is rightly regarded not merely as a traffic way but as a great national monument. Admirers of Rennie's masterpiece will hope that the corbelling-out will not seriously affect its appearance. There are many, indeed, who still hold that the bridge should be simply reconditioned, as any increase in width can but add to the existing traffic congestion, especially at the Strand outlet. What is wanted, as *The Builder* has frequently urged, is not wider bridges, but more bridges; a distribution, not a concentration, of traffic. There is apparently no possibility in the immediate future of a new bridge at Charing Cross, which is all the more reason why the claims for a new one between Waterloo and Blackfriars should be considered. Such a bridge might well be provided in the neighbourhood of the eastern arm of Aldwych, where it could be most conveniently erected to afford a much-needed means of communication between extensive "isolated" areas of North and South London.

The New Government Buildings.

With the close of the year came a satisfactory ending to the controversy over the Government's method of selecting architects for the proposed new buildings in London and Edinburgh. The imposition of an age limit of 55, excluding as it did Mr. Vincent Harris, the winner of the earlier London competition, and many other distinguished architects, aroused much criticism, and has not yet been satisfactorily explained; and it is to be hoped that in the event of further projects for public buildings there will be no attempt to impose an age limit. Mr. Harris and Mr. Thos. S. Tait have both been deservedly congratulated on their selection for the London and the Edinburgh building respectively. We hope, however, that the Government is fully conscious of the special nature of these projects, and that the procedure adopted does not imply an official embargo on the open competition system.

Registration.

Registration has been much in the minds of architects owing to the fact that applications for admission to the Register had to be sent in by December 31, after which, except in the case of architect members of the Royal Academy and of the Royal Scottish Academy, admission is only obtainable by examination. The position of those who have not been engaged in architecture for the statutory period and wish to register is still obscure, but we understand that the Act is being carefully scrutinised with a view to revision, and no doubt this, as well as other weaknesses, will be dealt with. It is doubtful whether those who advocated and sponsored this measure realised the difficulties that would be encountered or had any conception of the possible consequences of Registration.

Competitions.

1933 was not a great year for architectural competitions. The one that aroused most interest was that for the Hornsey Municipal Buildings, which was won with a clever and unusual design by Mr. R. H. Uren. Awkward sites have been a characteristic of many recent projects for municipal buildings (Hornsey was a case in point), and often there has been no opportunity for that formal, "four-square" type of design, with the symmetrical elevations that were the delight of an earlier generation of architects. As a result, many competitions have been won on ingenious planning. Mr. Uren's plan, while it provides what may be called a right-angled frontage, unified by a tower, is well composed and full of architectural interest, fits the irregular site to a nicety, and complies with the practical requirements of the programme. Mr. W. H. Adams, F.R.I.B.A., borough engineer and surveyor, will be associated in the execution of this work.

Other competitions of interest included the Burgh Chambers, Prestwick, won by Mr. Mervyn Noad with a simple, straightforward design in well-proportioned solid and void; the Surbiton Hospital competition, won by Mr. Wallace Marchment with an excellent design having elevations of the modern "horizontal" type; and the Small Villa Property competition organised by the Architectural Association, which, in its several sections, produced many excellent designs on somewhat conventional lines, though the prices of the houses were not sufficiently "competitive" to threaten the supremacy of the ordinary speculative builder.

Architectural Design.

The "battle" between the "Traditionalists" and the "Modernists" continued unabated, and neither side could claim the victory. Many buildings—great, medium-sized and small—exemplifying the sober and satisfying qualities of tradition were erected, and among these may be mentioned, at random, Sir Edwin Cooper's St. Mary's Hospital Medical School and Pathological Institute, Paddington; Mr. Vincent Harris's Civic Hall, Leeds; Messrs. Briggs and Thornely's Preston Municipal Buildings; Sir Giles Scott's Lady Margaret Hall and Chapel, Oxford; Sir Herbert Baker's and Mr. A. T. Scott's "South Africa House," Trafalgar-square; Mr. Cowles-Voysey's Worthing Town Hall; Mr. T. Cecil Howitt's Birmingham Municipal Bank; and many excellent post offices, telephone exchanges and other buildings by the gifted band of architects working under the direction of Sir Richard Allison at the Office of Works. The list could be added to considerably, but the foregoing will suffice to show that "Tradition" is far from being played out; indeed, that it can adapt itself admirably to the changing needs of the times. Against this we have to record the appearance of many buildings that aim to solve a practical problem in a modern way without any regard for traditional architectural forms or dressings. Some extremely interesting, thoughtful and stimulating works have been produced, and among these, writing from memory, we would include Sir John Burnet, Tait and Lorne's Freemasons' Hospital and Nursing Home, Ravenscourt Park; Mr. Oliver Hill's Midland Hotel, Morecambe; Messrs. Reilly, Budden and Marshall's Leverhulme Building, Liverpool School of Architecture; and Mr. Joseph Emberton's "Universal House," Southwark Bridge. The new movement appears to be gaining strength, and there is reason to suppose that in this country we shall see little of the apparently calculated ugliness that is to be found on the Continent.

Housing.

The fall in the cost of building made it possible, in the judgment of the Ministry of Health, for small houses to be built without subsidy, to let at rentals within the means of the lower-paid wage-earners, and, while the abolition of all subsidies (except for slum clearance and for schemes for about 40,000 houses, which were on the point of being submitted for approval when the new Housing Act came into force), has had no deterrent effect on the volume of house-building generally, it is important to remember that, on the Minister's own computation, only 18 per cent. of houses erected by private enterprise last year were built to let. Actually, there has been a further fall in the cost of the small non-parlour house, the economic rent of which, when built by a local authority, is stated by the Minister of Health to be 7s. 7d. per week, as compared with 8s. 2d. per week at the time of the abolition of the subsidy. It has to be remembered, however, that the Government is depending largely upon private enterprise for the provision of such small houses, and in the only scheme so far completed under the New Act (*i.e.*, 240 houses at Aldershot, undertaken by a public utility society), the rents charged are 11s. 10d. and 12s. 7d. per week, inclusive, the all-in cost of the houses having been £320 each. It is doubtful, therefore, whether private enterprise will be able to provide this small type of house cheaply enough, and in sufficient numbers, to make up the admittedly heavy shortage of such accommodation.

MODERN ARCHITECTURE IN ANGORA

By HERBERT McWILLIAMS, A.R.I.B.A.

The author made the journey from Palestine to England, across Asia Minor and the Balkans, in a specially made caravan. Angora, the new capital of Turkey, was one of the most striking places visited on the entire trip, and in this account some attempt is made to describe the astonishing way in which this city has been reborn, so that after only a few years it deserves to be ranked as one of the finest capitals in existence.

For six hours we had battled against the storm. A hundred miles of desolate muddy track lay behind us, and, according to the maps, only another twenty miles separated us from Angora. The bleak plains of Cappadocia were typical of the vast stretches of barren and practically uninhabited country, which appeared to comprise the whole of Asia Minor. Kisehir, the last town we had passed, was typical of the larger villages which are scattered at wide intervals along the road from Syria—primitive but picturesque, and strangely Russian in character. It was difficult to imagine how Angora could differ greatly from them, and as the heavy tyres ploughed through the deep mud I thought it would merely turn out to be a second Kisehir; possibly three or four times the size. Nothing was more suited to these undulating expanses than the wide eaves of flat, mud-covered roofs and the deep sheltering loggias with strong but slender wooden columns sometimes three stories in height. Even the trees, tall spidery poplars, seemed to be in tune with this general air of sharp simplicity, as shrill as the rare atmosphere itself.

The plateau on which Angora lies is high above sea level, and it is likely that the thinness of atmosphere is directly responsible for this delicacy of design, even in nature. But it was higher by many a muddy hill that Angora lay, and farther by twice the distance when we stopped some way beyond Kisehir to look at our maps. It was then about five in the afternoon, and, whether the capital was primitive or not, I guessed it could boast a hotel where one might make a good meal, so it was decided to press on and try to get there in time for dinner.

To describe the misery of that part of the journey is out of place here; briefly, it was one prolonged skidding over the wickedest clay tracks that could possibly be imagined. Now and then we would pass a car or lorry, abandoned by the roadside, with slime above the axles, and as often as not the front wheels embedded in the slough at the edge of the track. At eight it was high time Angora appeared in sight, but not even a distant glow of light marked the sky where we imagined it to be. Were it not for the fact that there had been no other turning which could have been taken by mistake, it seemed as if we were heading in the wrong direction altogether. Two wretched hours more were endured, bitterly cold and wet, before the first light was seen. And suddenly, after rounding a sharp corner, we pierced the strata of clouds and descended below it, so that the acres of brilliant electric lamps were almost blinding after the comparative gloom of the headlights.

Even from that distance, some ten miles at least, the size of the place was staggering. Strings of lights spread far out from the focal point of brightness which indicated the centre of the capital. These were the main avenues, only recently built, and as yet devoid for the most part of bordering houses. As we drew nearer, the vile tracks and ruts gave place to hard limestone, and eventually to asphalt. Asphalte after those miles of bog! It was unbelievable, but not more astounding than the boulevard into which we presently came; a long tree-lined strip of glittering asphalt with two-way traffic islands of grass bordered with well-kept flower beds.

Side roads for slow-moving traffic and quadruple sidewalks completed this astonishing lay-out, and farther on large buildings began to appear on either hand. Such buildings! If they had flat roofs they were of concrete, and the tall columns were not of wood. One might have been in Hamburg, for all the liner promenade-decks that stood out clear cut in the artificial glow. Expanses of plate glass, rounded balconies, horizontal window-panes; in fact, all the stock-in-trade of the "modern" architect. This was not what I had expected. I had read "Grey Wolf," and knew that the Gazi encouraged Western ideas in his people, to the extent of even doing away with traditional headgear in favour of modernity in this direction, but that his craze for being in the fashion should have extended to architecture was indeed a revelation. The hotel at which we stayed might have been in any European capital, equally ugly as a building as any Ritz or Bristol, but equally sleek and rich, with as many miles of deep corridor carpet.

Over a midnight supper in a vast grill-room filled with hundreds of gilt chairs and empty tables we gaped at the incongruity of it all. Those muddy plains, with their harsh winds that had whistled across leagues of emptiness, were still so near to our minds. This seemed like some dream, out of which we would presently awake to hear the chains tearing through the slimy ruts as the car battled against the storm.

By daylight the city was doubly fascinating. The border-line between the ancient town and its dominating citadel was clear to see; the new portion on the plain below has been laid out regardless of private property, and where some old building was in the way it was demolished. In spite of this, however, I do not think that it can be said that the capital has been really well planned. It is spacious and gives no feeling of being the least cramped, but it is neither symmetrical nor balanced in asymmetry.

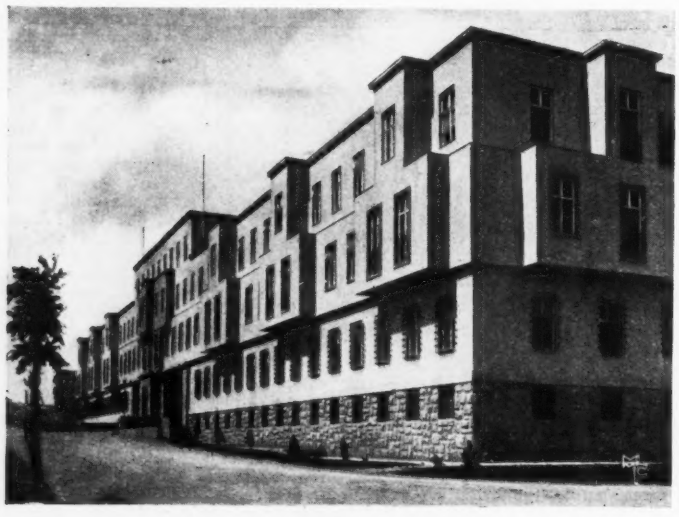
The old quarter occupies the top and sides of a rocky ridge, which extends in a wide curving sweep from what is now the farthest suburb to the centre of the city. This curve is repeated in the continuous boulevard which connects the two and which, at the business end, is about twice as wide as it is in the suburb. From it lead the subsidiary roads, the important junctions marked by large circuses or squares with some point of interest in the centre; a statue, or a fountain.

In practice, this arterial connection works well. It is always filled with traffic, the slow, lumbering carts and teams of oxen keeping to the paved side roads, and the smart, flashy American roadsters tearing down the centre. It only just misses being impressive; for some reason there are places where the focal points are off centre, where the axes do not work out, or where it is obliged to make undignified dives under railway bridges. The fact that the railway was not moved from its original position is the most deplorable feature of the whole plan. There is, indeed, a new station, well placed at the edge of the city, and it is probable that when further expansion takes place this will be used instead of the existing one, but at present it is isolated by a number of grassy fields, which no doubt will be built over in time.

The centre of the city is actually the original square, in the centre of which stands a monstrous statue of Mustafa Kemal, surrounded by attendant bronzes and ponderous granite bastions. There is nothing of architectural merit in the radius of half a mile. But it is all clean and neat, so different from the squalor of ordinary Turkish towns, and a vast improvement on the untidy and careless methods found in Constantinople, where everything is allowed to fall into decay.

From this "place" runs the main thoroughfare, along the side of the ridge, and another lesser avenue leads from it down the slope to the House of Parliament, a large and hideous building erected some time before the work of reconstructing the capital was seriously considered. Next to it, however, is a block of departmental offices which is tolerably good and possesses quite a measure of pleasing character. The chief mistake in Angora seems to be that such a drab grey should have been selected for most of the new buildings. Walls are invariably distempered in this dreary colour, and the opportunity of using a bright colour for shutters and window frames has been entirely ignored. It must be the Germanic influence, for even in Russia, where the style of design followed in Austria and Germany is also imitated, a greenish grey is also used.

The coffers of the Turkish government are not able to stand lavish expenditure on schemes for rebuilding, so everything bears the stamp of economy. This is perhaps one of the very reasons why so much of the modern work is good. Few of the saucy conceits of modernity (already sadly out of date!) could be indulged in. Building materials are of the simplest; the surrounding country is stony, but it is all a brittle unworkable variety, and is not much used. Brick, rough-cast, with stone copings is the common material for all work, and as roofing materials have to be brought hundreds of miles by railway (with, indeed, everything else required in the capital), only the most durable and easily packed kind is used, such as asbestos tiles, corrugated iron, and so on. Parapets hide this far-from-beautiful roof, and give the buildings the clean-cut outlines so much sought after in these days. Private com-



A BLOCK OF APARTMENTS, ANGORA.
One of Four Blocks symmetrically arranged at a Junction in the Main Avenue.

GOVERNMENT OFFICES, ANGORA:
Detail of Covered Way in internal Courtyard.

panies, however, spend larger sums than the government are able to afford, and many of the houses are roofed with major-pattern tiles and boast porticos of imported stone.

There are two outstanding buildings in Angora. The first is undoubtedly the enormous new offices for the government. This was designed by Professor Holzmeister, and was only just completed when I saw it. It is perhaps a trifle bleak, and provides possibly the largest amount of accommodation which could be obtained for the money. Nevertheless, it has definite character, and by clever arrangement of mass and the spacing of the countless windows, it has been given dignity and importance. Unfortunately it is colour-washed with cold grey, only relieved by the brown stone of which the lower parts of the walls are built. In brilliant sunlight this was depressing, so that during the winter, when the entire plateau is covered with snow and the skies are equally melancholy it must be even more dismal. But great care has been taken with all the details; bronze window frames, blind fittings, doors, floors, railings and lighting fixtures, are the best that can be obtained, and the standard of the workmanship throughout is extraordinarily high. The finish of the plaster work in particular is outstanding, and it was strange to realise that it had been done by the Turkish workmen alone.

The main block of this building is merely an enormous rectangular courtyard, surrounded by three stories of offices with a central corridor. The quadrangle contains a large pool set in what will ultimately be a grass plot, and exterior connection between the various departments is obtained by a narrow veranda running entirely round the courtyard. This is supported on slender concrete piers, and furnishes the link with the spidery traditional style of the district. By its size and plainness alone this courtyard is impressive, and seen from a distance the contour of the whole group of buildings is most satisfactory.

The second building which is outstanding, is the high school for girls, standing on the main avenue, fairly near the centre of the town. The four floors of classrooms, a pile of horizontal layers, are held together by vertically stressed staircase-towers at either end; the composition is straightforward and pleasant. Again, the excellence of the workmanship renders what might, through careless finish, have been a failure, a signal success. It is all so neat, so vigorously clear-cut. I suspect the influence of Prof. Holzmeister here, too, if indeed the whole design is not entirely his; but it was almost impossible to get reliable information concerning the architects of some of the buildings.

The meteorological station behind the school was, I am told, designed by a Turkish architect, and if this is so, it is a very creditable piece of work. Perhaps it strives a trifle too obviously to be in the fashion, even to the sculptured figure over the entrance. Further up the hill is the hospital, one of the earlier buildings, and bearing the unmistakable touch of German influence. Nobody could give me the least information about it. On both sides of the main avenue there are numerous blocks of apartments, all constructed as economically as possible, but nevertheless possessing individuality and character. Great play is made with projecting bays, and except for a facing of mountain stone along the lower floor they are all finished in stucco, which has been treated in various ways to obtain interesting texture.

The power station is cleanly laid out, with a block of administrative offices on the street-front containing shops, in which the latest heating and lighting apparatus is displayed. Again, economy and lack of elaborate materials results in something which is satisfactory and sensible.

On a rise overlooking the city, towards the industrial quarter, is a liquor factory, perhaps one of the most European looking buildings in Turkey! It might have been transplanted bodily from some German industrial centre. To find such a building standing on the stark steppes of Anatolia is little short of absurd, for looking away from Angora there is literally nothing but open country to be seen; the city stops abruptly in a neat white fence on three sides, while the fourth is naturally bounded by the rocky ridge.

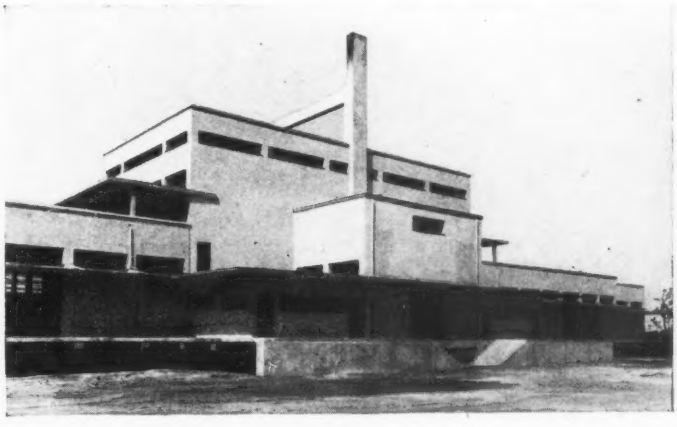
Two minutes' walk from the central square brings one to the racecourse, beyond which there are no buildings whatever. But it is half-an-hour's drive to the other end of the main avenue, where the house of the Gazi himself terminates it. This remarkable building has already been described and illustrated in architectural papers, so that it would be out of place to discuss it here. Painted a pinkish-tan, it lies on the brow of the ridge as if it were conceived for that particular site alone, which is more than can be said for many "modern" designs. There is something in its spidery lines that suggests the virile quality of the atmosphere as well as the character of Mustafa Kemal himself.

Possibly the commands of the dictator influenced this end of the lay-out, for no capable town-planner would force the boulevard direct at so steep a hill as that up which the approach to the residency lies. I fancy that the indisputable authority which ordered a miniature scale model of the Sea of Marmora, some hundreds of yards in length, to be made at the country seat, also obliged the avenue to lead to the entrance gate without the indignity of a turn to ease the gradient. At the foot of this rise are the various embassies and legations, housed in curiously assorted styles of buildings. It is possible to determine the nationality of each by a glance at the style in which it is built, except, perhaps, that of Great Britain!

The German Embassy is complete even to the imported linden trees on either side of the door. The American Legation, with a Colonial portico, may be picked out from a mile away, and there was an extraordinary Moorish-looking mansion that could have belonged only to some Eastern power.

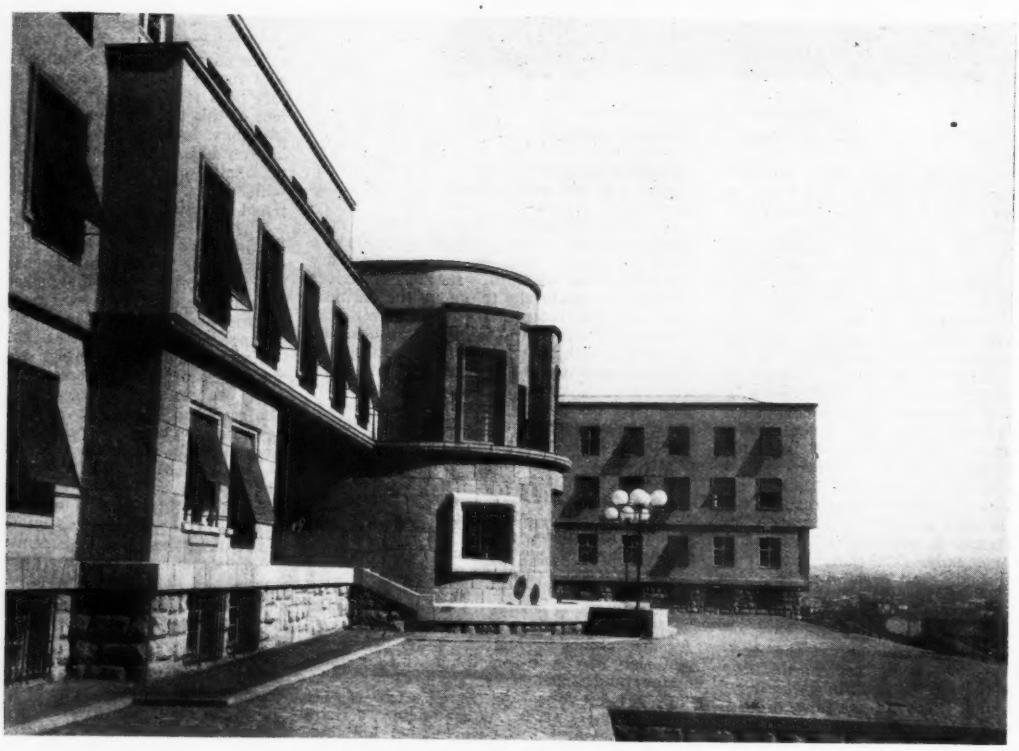
Among this sea of foreign roofing-tiles one may pick out four-square, flat-roofed dwellings, the product of the capital itself, bearing the stamp of the local style of design Some of these are good, and, with well-kept gardens and a spot of colour on the awnings, provide the right note for the residential quarter of the capital.

Looking through the collection of photographs of these attempts in Angora to be up to date, there does not seem so much merit in the mere designs as they appear. It is the fact that a dozen years ago there was nothing but a large village, unkempt and unattractive, to form the headquarters of the new Government, that has to be remembered when they are studied; also the fact that someone has tried to prevent a town from struggling through the stifling effects of gradual growth to importance, and given it a foundation on which may be built the capital of a country which is worthy of the effort.

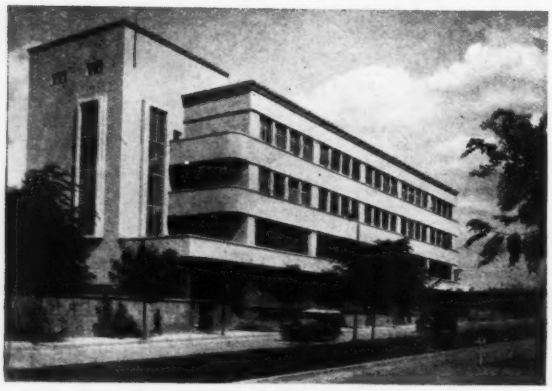


STATE-OWNED LIQUOR FACTORY, ANGORA.
This building, which has white walls and dark blue window frames, is depicted on labels and posters for beverages

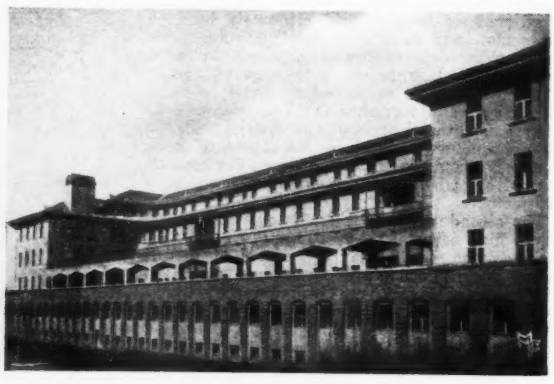
BLOCK OF APARTMENTS.



GOVERNMENT OFFICES : Entrance to Main Block.



GIRLS' HIGH SCHOOL.



A HOSPITAL.

NEW BUILDINGS IN ANGORA.

THE INDUSTRY IN 1934

By H. B. BRYANT, Secretary of the Building Industries National Council.

THE year 1933 has gone and, so far as the building industry proper is concerned, without many, if any, regrets. It might, however, be added with some justice that it has left some minor historical marks from which lessons for future guidance might with advantage be taken. Perhaps the three most important of these are with respect to economic reconstruction, housing, public works, and inter-relationships generally within the industry, and it is fairly certain that these particular aspects will have developments of more or less importance to the industry during the forthcoming year.

Economic Reconstruction.

During the early summer and autumn of 1933 unemployment in the building section of the industry showed a fairly consistently maintained decrease, but in the public works section of the industry the decrease was not so well marked. This measure of increased employment is largely attributable to the change in public opinion on the matter of public "economy." In short, the public have found that "economy" does not pay, and that by spending wisely they are better off. When the "economy" edict came forth in 1931 it was hailed as the one and only means of "saving" the gold standard —and the country. Neither the gold standard nor the country was "saved" by this measure. The gold standard went, and unemployment in the country quickly increased. Then we were told that the country, and in due course the world, could only be saved by a world conference for the purpose of putting this, and all other countries of the world, right by some form of common economic action. That effort was early a dismal failure, as by any measure of foresight could have been foreseen. These attempts to do something constructive appear to have exhausted the efforts of our "economic doctors," and for a short period they let industry and economic conditions alone.

As might have been expected, immediately this welcome break in the attentions of the "doctors" came, things industrially began to improve a little, since which time, all suggestions of further world or other forms of economic conferences having been dropped, the improvement in employment has been more or less maintained, subject only, as far as the building industry is concerned, to the usual seasonal, but still accentuated decline. This betterment in things economic is said to be based on that most subtle of all human attributes—euphemistically termed "confidence." There is supposed to be a greater degree of confidence in industry generally in the country. This may be so; and therein lies a potential danger as far as the building industry is concerned. This so-called "confidence" is really nothing more than an intensification of the free and unfettered forces of commercialism which, solely for the purpose of achieving its ends, does increase a certain type of employment whilst those ends are in view. This aspect of the present position is of real significance to the building industry. Under the old untrammelled system of industrialism, which has for the moment apparently returned, the works of the building industry were largely regarded (the exception being the highly enlightened industrialists) as evil necessities. It was admitted that offices, workshops and factories were necessary, but the least money spent upon them and the least expenditure on sites, however unsuitable from the point of view of amenities, was regarded as being in accord with sound business and, too often, the less money spent by a concern in buildings the better. The task of the building industry in this relation in 1934 is to maintain a consistent effort of sowing the seed of the knowledge and belief in the public mind of the country that the building industry, properly applied, can not only contribute very materially by scientifically planned structures to general industrial prosperity, but can give an assurance that, properly managed, the structures it produces will not create, as so many of its structures in the past have done, a huge national charge to right the wrongs of those responsible for short-sighted industrial development. The industry must force home, by every means in its power, knowledge of exactly what the architect can do for industry and commerce.

It is no good appealing to the so-called hard-headed (appropriate term) industrialist from the ethical point of view. He must be told exactly how a well-sited and well-planned factory, office or warehouse will advantageously affect his balance-sheet, and he will then, in all probability, become interested.

The building industry has this story to tell. It can, if it is given the opportunity, revolutionise our present industrial centres. It is safe to say that hardly 10 per cent. of our 150,000 registered factories alone would be approved as suitable structures by any one of our many highly-trained industrial architects. Given full scope, there is probably hardly a single factory, apart from a comparatively few really modern ones, that an architect could not improve upon, judged from even the simple financial point of view.

This change, then, from the crude governmental and departmental interference in industry of the past year is to be welcomed, but the freedom of the industry thus gained must be an enlightened freedom A freedom in which the best that every industry can produce must be utilised to the common end. Selfish industrialism in industry must be checked, and the different units of industry must vie with one another in improving the conditions under which they produce. Industry must in future produce in the best of factories that science can provide and not in the worst. If this view of industrial responsibility is not accepted by the essentially commercial-minded interests of the country, then some element of organisation will unquestionably be imposed. The building industry is equipped to provide the scientifically designed and planned type of industrial and commercial structure that has proved so effective as a means of industrial resuscitation in other countries of the world. The building industry should see that its powers and uses as an agent of industrial rehabilitation in this country are not checked by the short-sighted policy of those other interests which should be the first to use the powers of the building industry in their own and the country's need and well-being. In short, the industry must see that it becomes recognised to be as much a crime to own a slum and out-of-date factory as it is to own a slum house. To get that view thoroughly inculcated in the public mind is not the least of the tasks of the industry for 1934.

Housing.

It is under this heading that the greater portion of the increase in employment during 1933 falls, but here again this increase in employment really arises from the unfettered and free play of the commercial instinct in social matters. After a period of approximately fourteen years of something at least approaching organised effort in house building it has been thought fit to throw the process of national housing production to—what has been not inaptly termed in some quarters —"the wolves of jerry-building"; and, of course, while the prizes of such exploitation are available again, a certain means of increased employment will be created in the course of the rush for the spoil.

But from the building industry point of view, this method of dealing with this national problem is really very sad. We know that very little of this development is taking place under the ægis of the qualified architect. The very influence which properly qualified opinion guards as one of its first prizes, namely, beauty in its domestic architecture, is in the alleged interests of general industry regarded as of no importance merely because the unenlightened public holds that beauty in domestic architecture is very costly. No greater blunder could be made by those responsible for dealing with this part of the national problem. As if the absence of architectural amenities and the beauty that only architectural design can give to our housing were not enough, we are faced, if reports are true, with a mass of inferior work. The mass-producing speculator is to-day producing houses of lesser size and of poorer specification, and by work very largely executed under the most unorganised of conditions; in short, in a general atmosphere of exploitation, at a cost to the purchasing public much higher than that at which the local authorities with all the obvious disadvantages of their scheme were providing houses. The limit of super-area imposed by the municipalities in their houses was approximately 740 super. feet. It is apparent that there are hundreds of so-called workers' houses now being sold (at a most obviously profitable figure) with an area of not much more than 550 super. feet. The tragedy of this position is that eventually deterioration in these houses will be so rapid that we shall have a mass of slums in many cases as virulent as the slums with which we are faced to-day.

All this represents, from the really enlightened point of view, a very sad aspect for the building industry in 1934. It does, however, indicate that the industry has a tremendous task in this respect in front of it. It indicates that the industry has a direct responsibility in the matter. The industry must in the coming year endeavour to put itself more into an executive position in the great matter of housing than it has done in the past. The present housing effort will fail for fundamental reasons. Under the scheme of blessing unfettered private enterprise, housing for the lower-paid casual worker obviously will not be provided. There being no pecuniary rewards in the provision of housing for people who *cannot* afford rent —the casual worker—private enterprise cannot be expected to provide it. The building industry must take some steps to be responsible for an altogether higher standard of working-class housing generally. There is no justification whatever for allowing the houses of the working classes in this country to be developed without the great advantage of the beautifying influence of the properly trained architect.

Of course, it may sound entirely self-interested for the building industry to put forward such a view, and it is self-interested, but it has the great advantage of being enlightened self-interest; a self-interest which also has the singular advantage of spreading its beneficial influence as no other form of self-interest can. The bright spot from the national point of view is the rather extraordinary degree of public-instructed interest in the matter of slums. But here, again, it is apparent that a dismal tale of failure in national effort has to be told. No one believes for a moment that the present slum-clearance effort will produce anything in the nature of the total abolition of slums. The fact surely is that if the subsidy is not justified for housing, it cannot possibly be justified for slum clearance and rehousing. In practice, the subsidy towards slum clearance costs is being largely paid in the form of enhanced site values and not directly for slum clearance at all, and certainly not for the production of working-class houses. The irony of this position is that there is enough legislation on the Statute Book (there has been for years) to clear every slum in the country without hardly a penny cost falling upon the National Exchequer. For many years it has been laid down by legislation that it is almost a crime to own slum-houses, yet very few of the local authorities have exercised their powers to clear their slums even when they had the most advantageous form of financial assistance for housing.

The fact is that slums are the direct result of our crude industrial system, whereby, in

the past, it has been possible for factories and commercial ventures of all kinds to be established in the centre, and on the immediate outskirts, of our towns, often at the expense of existing housing accommodation, and the owners of these factories have been allowed to gather numbers of working people round them for their immediate industrial ends, without much regard as to whether the adjacent housing conditions are sufficient or whether sufficient housing can economically be provided to house the workers they employ, often only temporarily. It is manifestly impossible to remedy this position by a direct subsidy, as such an attempted cure does not really touch the fundamental causes of the slums at all. All that a subsidy does under present conditions, as far as our congested towns are concerned, is to remove slums from one spot to another. It is equally manifestly impossible to solve effectively the slum problem by the erection of massive blocks of human rabbit warrens, euphemistically termed "workers' flats."

There are, of course, special circumstances in which the ghastly overcrowding of sites by industrial dwellings in the form of blocks of flats may be justified as an expedient, but such solution can never be a permanent solution while even the English slum dweller retains but a spark of his national characteristic independence.

It is not the purpose of this article to point out the obvious weakness of any housing policy based upon the hope of converting what still are our freedom-loving people into industrial rabbits by forcing them to live in huge vertical warrens of bricks and mortar. The average Englishman would much prefer to be a freedom-loving (and living) slum-dweller than an "uplifted" dweller in some of the proposed piles of industrial cubicles—splendid architectural productions as so many are.

The real solution of the slum problem will be found in the solution of our industrial problem, along the lines of a wider and much more humane conception of industrial responsibilities and needs, expressed in terms not only of the most up-to-date factories and a much more consistent basis of wages and security of employment, but also of the most up-to-date form of housing for the workers employed in those factories; the success of the one is entirely dependent on the other.

A further task, therefore, before the industry in 1934 is to put itself in a position of readiness to deal with the housing problem of the country (apart from the slum problem) when it is called upon, as it must eventually be, as an organised industry, to deal with it as a matter of its own direct concern.

While the powers-that-be continue to prefer to attempt to find a solution of the housing problem in committees of anybody not connected with the building industry, with, perhaps, a sprinkling of the medical and legal professions to keep them from becoming too absurd, the country will, of course, remain in the hopeless mess it is in to-day. No doubt the country one day, and perhaps even our politicians, will awaken to the advantage of asking the building industry to do what is, after all, its own proper job. So, again, the problem of national housing is not the least of the tasks before the building industry.

Public Works.

In approaching this aspect of the position for 1934 it is not possible to get away from the realisation that, with all the sacrifices called for and insisted upon by the country's high priests of economy, the sacrifices of the workers dependent on public works are truly the most terrible. This sacrifice to the gods of economy, however, is still persisted in, but it is developing in its train a most ghastly mass tragedy in conditions of a most virulent form of unemployment; the bill of account will one day surely be presented to the nation.

It is under the heading of unemployment that the greatest responsibility rests upon the leading and enlightened members of the industry. They have a responsibility to these workers in the industry who for years materially helped to provide the more fortunately placed in the industry with their livelihood, to see that none of the responsible leaders of the industry slack in their efforts to right this undoubted wrong, which a perverted conception of statesmanship has done to the industry. Their duty in this respect is to remove this form of entirely undeserved punishment of unemployment, which has been so unjustly imposed upon those workers by forces entirely outside their control.

The task of the industry in this direction is almost entirely an educational one. It must educate the public opinion of the country, not only as to the economic and social advantages of a steady and consistent development of public works, but also it must bring home to the powers-that-be the fact that, while this ban on public works continues, it is maintained at the cost of nearly half-a-million more or less skilled operatives and their dependents, living under conditions of semi-starvation, and certainly semi-social degradation.

Inter-relationships within the Industry.

It is under this heading that the essentially domestic task of the industry falls. There is no doubt whatever that there has been, during recent years, a widely enlightened appreciation of the elementary fact that the architect and the engineer are as much dependent upon the builder's labourer as the builder's labourer is dependent upon them. The development of this simple realisation opens a very wide field of most progressive and constructive work in and on behalf of the industry as a whole.

The industry has many tasks before it, some of widespread national importance and application; the task of putting its own house, from the industrial point of view, in order is almost as big and certainly as important as any of them. The industry has in the past functioned as a series of water-tight compartments. The year 1931 showed, as no other experience could have shown, the weakness of that position. By one fell swoop of the national administrative axe the industry was deprived of nearly 50 per cent. of its normal trade at a time when it was not in a position to raise even a squeak of a dissentient voice representative of the industry as a whole, against that primitive and panic-stricken action. When the position came to be examined by the industry, its own organisational weakness became very apparent, and to some extent it is still apparent, although great strides towards co-ordination have been made, for which the industry owes a tremendous debt of gratitude to those few men who banded themselves together as the appointed representatives of the different interests in the industry, determined to take whatever protective measures were open to them, difficult and complex though the circumstances were, in the best interests of the industry. These men truly deserve the confidence of the industry. Study of the position quickly brought to light many difficulties, and it has become necessary to examine minutely some of the prevailing conceptions of industrial associations and of industrial responsibility.

Organisation within the industry must be based primarily upon ethical considerations. No progress towards real betterment will be made under the old conception of functional insularity, and the forswearing of the common responsibilities of the industry. Independent functioning within the industry for entirely insular ends is, under modern conditions, a menace to the industry, which must be organised to the extent of being as much master of its own destinies as any industry can be.

The simple basis of the relationship within the industry must be the realisation that the inter-dependence of all dependent upon the industry is completely mutual. There is a definite and a somewhat special degree of responsibility resting upon the architect in the ordinary course of his practice, in that he is the initiating machine upon which the ultimate employment of the best within the industry depends. It follows from this that the architect who does not use his every endeavour to spread the knowledge of the advantages of his work to the nation is failing, at least to some extent, in his responsibilities. The spread of the beauty that cultured architecture can add to the sum of human happiness, particularly in so many of our industrial towns, could properly form the basis of a national crusade. The national sense of architectural appreciation is no more developed than a rabbit's tail, and is just as shaky. The nation is centuries behind the worst of the Greek and Roman periods in this respect. The industry is the second largest employing industry in the country; it employs the second greatest number of heads of families in the country. A practical administrative machine for dealing with all aspects of the common problems of the industry has now been instituted, and there is no doubt that, properly supported, great good will accrue to the industry by its efforts. But the very nature and size of the industry carries heavy common responsibilities with it. As an example, the need for some form of common benevolent service is a crying one. It is estimated, for instance, that the industry creates on an average no less than 100 orphans every year, but it does not, in any form comprehensively representative of the industry, provide a single penny for any form of benevolent care for them.

When it is remembered that for many years such a small fraternity of workers as commercial travellers have consistently maintained benevolent institutions of various kinds for their dependents at considerable cost to themselves, it shows how very far behind the building industry falls in this respect. This, in relation to the fact that the building industry tops the official list of reported accidents, makes a somewhat sorry comparison. Even the hard-pressed miners provide facilities for their orphaned dependents and aged workers, and have seen, as far as lay in their power, that help is given to those sacrificed in the processes of their industry.

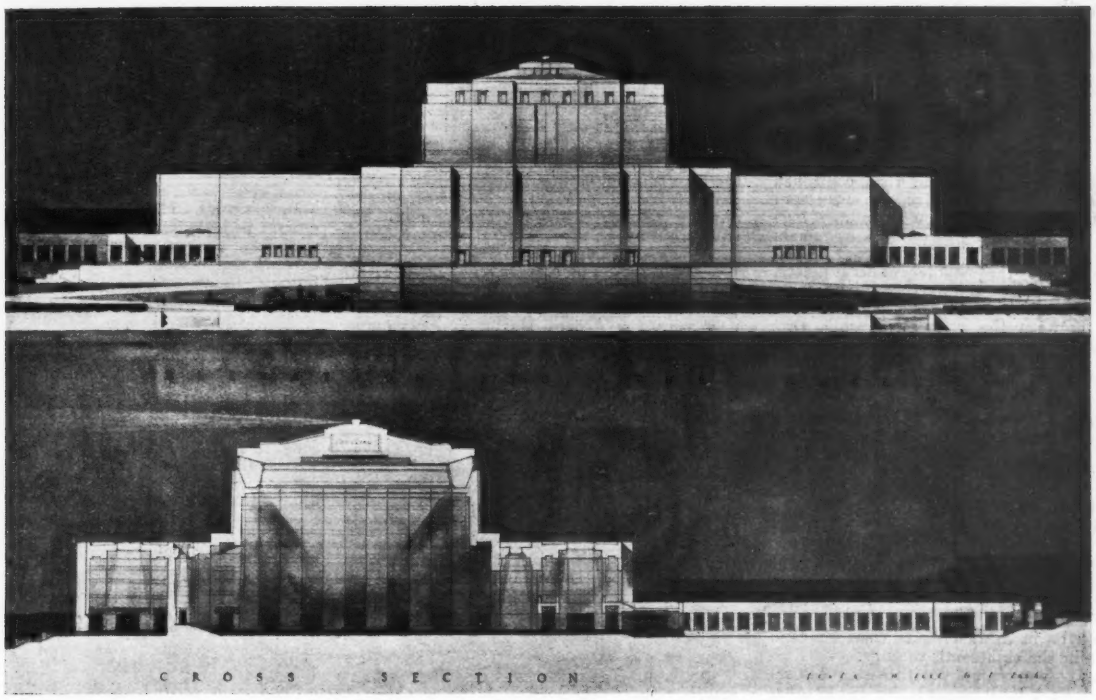
The building industry, far richer and far more able, by the very nature of its industry, to provide those facilities, does practically nothing along such lines, apart, of course, from the valiant but purely domestic effort of certain trade unions and the praiseworthy, but necessarily circumscribed, efforts of the builders in certain localities. It should be quite obvious that no really permanent progress can accrue to the industry until it accepts boldly and constructively its moral responsibility in this direction. Neither can it expect any high degree of public regard or respect as an industry, which it obviously lacks at present, while it refuses to do so.

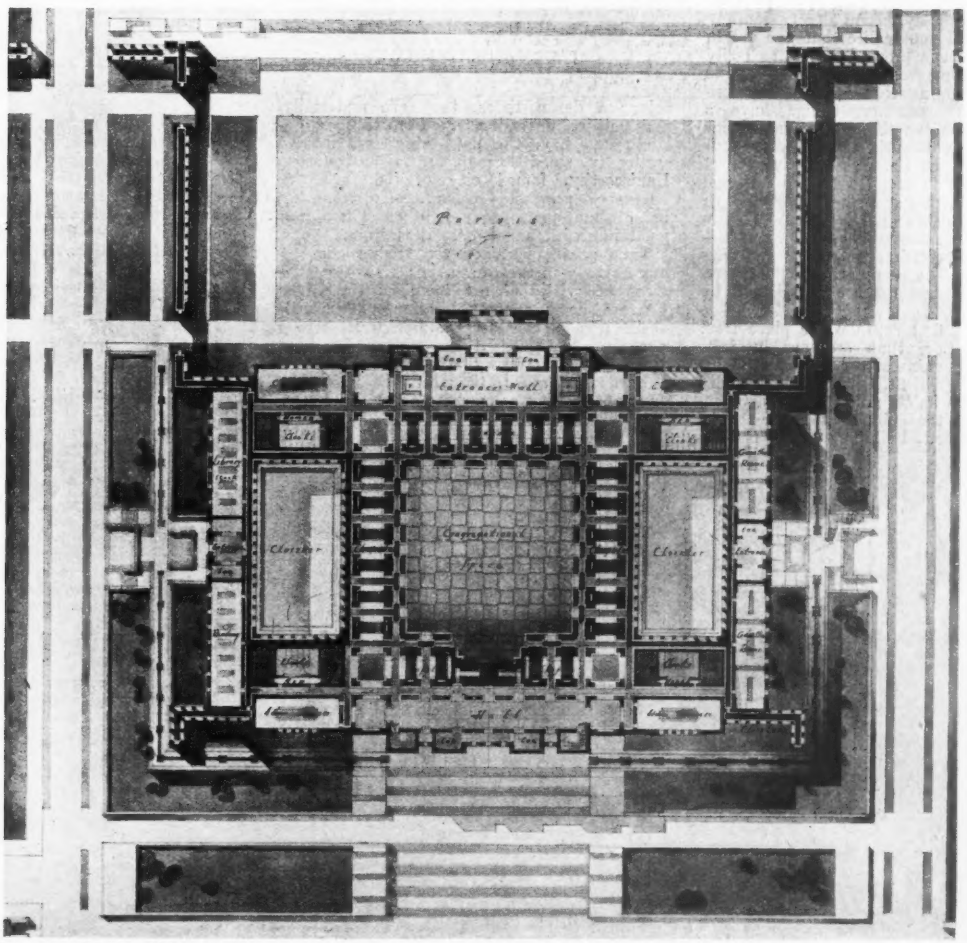
This apparent indifference within the industry to some form of benevolence facilities is not, however, a calculated indifference. It is merely that the leaders of the industry have never had any established means of considering or dealing with the matter. Now that such means do exist it must in the near future be considered. No responsible member of the industry can be really satisfied with the position whereby his well-being within the industry is dependent, if only to the smallest extent, on an industrial sacrifice of at least 50 heads of families a year by fatal accidents alone.

The task of instituting some system of benevolence within the industry is not a difficult one, and could be instituted without any large-scale organisation. The imagination is not tried in any way by attempting to realise what a simple offering from within the industry could produce for this purpose, from, say, the 6,000 architects, the 5,000 engineers, the 1,000 surveyors, the 10,000 contractors, and the 850,000 operatives.

The remaining major matters concerning inter-relationship within the industry are, technical and economic education and the development by the industry of a constructive voice in the affairs of the nation as they concern the building industry. All these questions must be given their due consideration in 1934.

To sum up, therefore, 1934 presents from every point of view great and difficult tasks for the industry to concentrate upon. Tasks which must be faced and undertaken, and which warrant the full support of all concerned.





The Soane Medallion, 1934.

"AN INTERNATIONAL TEMPLE OF RELIGION. GENEVA, WINNING DESIGN."

By MR. HUBERT BENNETT, A.R.I.B.A. (See page 88)

NOTES FROM AN IRISH SKETCH BOOK

By PROFESSOR A. E. RICHARDSON, F.S.A.

THE traveller who would gain a reasonable opinion of Ireland should not confine his studies to week-end trips to Dublin; neither should the allurements of guide books and distant views prove too attractive. Nothing but close acquaintance, and that continued over many years, will give the necessary viewpoint. Further, if you have any love for green and pleasant places, such as remain free from spoliation, visit the neighbouring land. Go into the remote country places, enjoy the incomparable scenery, the mysterious charms of bog road and boreen; wander between the grey stone walls that line the highways, explore old castles and monasteries, linger in the age-old churches; above all things, pause to admire the simple statement of whitewashed cabins and thatched roofs no less than the stately mansions of a vanishing order. There is no better way into Ireland than by an unfrequented route, Fishguard and Rosslare for choice. If you journey from London by road, at least 250 miles of romantic country lies between you and the Welsh harbour. Beyond this is the choppy stretch of sea separating fairyland from English eyes. If you desire knowledge of Ireland, the rural and urban scenes of that country afford contrasts of the past which are of inestimable value to the present, and once there you begin to understand what England was like in the eighteenth century.

Landed, you meet with a pleasure-loving, keen-witted people; the roads seem interminable, the distances blend from apple greens to greys and cobalt, free this last summer from the mists and spillings that engender melancholy. As you journey towards Wexford you realise that you are in a land where things proceed almost as lazily as the smoke rising from the peat fires of the cabins. You opine that here in this uncommon country common things have a reality, a definite tangibility that makes for independence; and such truths take your thoughts away from the civilised savagery of industrialism. You long to take pencil and paper, to jot down the form of every rough donkey and inquisitive goat, for natural subjects—and in this can be included humans—group almost as picturesquely as in the days of Dr. Syntax. The roads are excellent, concrete kerbs and signposts are conspicuous by their absence.

Wexford, the first considerable place from Rosslare, has more than ordinary interest. There are the remains of the mediæval walls, the ruined Abbey of St. Selsker, the splendid quay, more than half a mile in length, Cromwell's fort and the suburb of Faithe. The only distinguished building in a modern classical sense is the town hall, which recalls the manner of Gandon, and that to use a local phrase, "is only half what it once was, for it was destroyed entirely in the Troubles." At Wexford you gather first impressions of the type of architecture common to the south-east of Ireland. You feel that, in some strange fashion, whole streets of diminutive houses have been lifted from Devonport, Penzance or Haverfordwest, and after some juggling have been rearranged to suit local taste. There are the sashed windows, the door trims and the pentice heads which were new with the Act of Union, and although outwardly these attributes may have changed

PILE DRIVING, YOUGHAL.

colour a dozen times, they are materially and politically the same. Proceeding by a landlocked bay, the next objective, Enniscorthy, is gained through undulating country. Enniscorthy, famed city of '98, has the charm of riverside scenery, of dominating heights and picturesque huddle. There is a good inn with a geometrical staircase.

Time goes quickly on the Irish roads but more slowly in the towns. At New Ross the steep acclivities of the town on the River Barrow demanded exploration; afterwards there was a visit to the old walls which according to tradition defied Cromwell. Soon Ross was a memory, the country opened towards the south, the roads became more frequented. It was market day at Waterford, and when we arrived at the fifth town in Ireland, we were back in the past with a vengeance. Shades of old travellers, what a place! How noble the quay; how wide the river; how dignified the brick-built houses in the Mall, once the abode of prosperous merchants. Then by contrast the Town Hall and Gandon's Court house. It would, however, be impossible to describe any other inland port, with the exception of Bordeaux, endowed with such a splendid river frontage. But all things considered the most lasting impression of this delightful place, so favoured geographically and so beautifully sunlit, centres in its human activities. Here on the quay you find ancient carts unloading agricultural produce, droves of cattle, crowds of farmers, small toll houses, piles of crates, barrels, tarpaulins, timbers and all kinds of commodities, set out in seeming confusion. Lying alongside are the black hulls and gaily-painted funnels of a dozen ocean-going tramps, their bulk contrasting with the needle masts of the Swedish barquetine or the untidy sheer of the German schooner unloading coal. Almost a stone's-throw away stretches the long line of decent shops recalling Nassau-street, Dublin, while at the end of the quay is the circular "Castle," sole survivor of the chain of fortifications held by Strongbow. The secret of Ireland's attraction lies not in grandeur of architectural display but in her retention of age-old customs. Formerly, that is to say, a century ago, Waterford was famous as a manufacturing centre for glass ware. Her crystal productions found favour at Versailles and enhanced countless drawing-rooms in Dublin and London. Waterford was then in close touch with Bristol, and there seems to have been an affinity between these two glass-producing places. But now, "Ichabod," there is nothing crystal left. All that could be discovered of ancient craft, three pieces of broken table ware, reposed on the shelves of a chemist's shop; dainty immolated relics of departed splendour. The day was drawing to a close at Garryduff, where the road descends to the estuary of the Blackwater and unfolds a vista of the bay, coast and town of Youghal. The travellers had arrived at a place of remote antiquity, possessing a charter of incorporation going back to the time of King John. Cromwell, for a time, made Youghal his headquarters; its sieges and burnings are too numerous to be related. The main street is more than a mile in length, and it is divided at the centre by the "Clock Gate," built of brick in 1779. And so, as the diarist would have written, to the Devonshire Arms. Now if there is one particular in which Ireland differs from other lands, Sweden excepted, it is in the scarcity of good posting establishments. In England the inn is a national institution; in Ireland, on the other hand, it is exceptional to find anything approaching the solid bucolic integrity usually conceived to indicate a coaching hostelry. But

THE WALLS OF DUBLIN.

BELVEDERE SCHOOL, GARDINER'S ROW, DUBLIN.

at Youghal, thanks to the wisdom of a former Duke of Devonshire who lived at Lismore, there exists an inn worthy of a pæan of praise from Mr. Yates. Italianate in form, Regency in detail, with appropriate appendages, and a quadrilateral in the Spanish manner, which does duty as stabling, the Devonshire Arms is a delight. Upstairs there is an immense apartment, "the best bedroom in the house."

The view of Youghal by moonlight, with the chimney tops and modest roofs silhouetted against the depths of the river, is a soft scene, engendering thoughts of the adjacent Myrtle Grove, Raleigh's home, and the earliest whiffs of tobacco smoke. And thou, O noble Devonshire Arms, with thy reeded mouldings and grand six-panelled doors, what more can be said than to extol thy whitewashed walls! The town was *en fête*, a procession headed by kilted pipers paraded the main street. Lights flickered at the windows, costumed figurants rode upon improvised chariots, red Indians consorted with Roman warriors, sweeps danced with colleens, bright eyes gleamed from under shawls worn in Spanish fashion, while benignant priests looked on with approval. We admired the reason for the carnival, which was to provide funds for a new parish church. Next day, a leisurely survey of the town and its activities. The breadth of the Blackwater, the height of its wooded banks, the hint of demure country mansions, the depth and romance of its lateral glens, stir ones imagination. Thus you regard this region of pastoral landscape. As alternatives there were the clock tower and on the bench a group of workers driving a pile in the approved fashion of the dockyard customs of a previous age. The artist could spend a profitable holiday hereabouts, and linger at Rincrew, Glendine, or Cappoquin.

Acting on impulse, it was decided to reach Cork the same afternoon by the great road that has seen so much of Irish history. Passing Castlemartyr, the old castle of Imokily and Middleton, the thoroughfare town, with its neat town hall and cupola, the way led to the Glanmire river and the environs of the second city in the Irish Free State. Cork lies in a valley at the head of the estuary of the river Lee. The general appearance of the streets is good, the nobility of St. Finbars Cathedral, a masterpiece by Burgess, the scale of the Georgian mansions fronting the South Mall, the stone bridges and the fine shops are so many allurements. All strangers make pilgrimage to St. Ann's Church to hear the Bells of Shandon. Cork and the surrounding country is best seen in early September; then the colour of the buildings and the delicate umbrageous greenery of glen and hillside assume those pale tints which are so gracious. You begin your perambulations with vigour and not a little aversion for the black mud which the tide leaves in obscure backwaters of the river. As the charm of the city enters your mind you realise how far south you are and how different Cork is from Dublin, how foreign by comparison with Belfast.

"Sure, it's well to be you, sor," said a local worthy to the writer. "Admiring the houses is it? Grand they are, but if it was me that owned them, or the worth of them, it's not much longer I'd be stopping in this doleful place, 'deed and I wouldn't." We hastened to point out the beauty of the Commercial Rooms, with its subtle curvature, the delicacy of a fluted cornice cresting a brick façade, and the texture of the russet brickwork. Our acquaintance was not the least impressed. "They're plague of our life," he declared. "Many's the time I hate the sight of them, but it's my belief that if such things give pleasure to strangers they are welcome to all such sights." But this is not a fair specimen of civic pride, for the people of Cork do realise the beauty of their city, and they like to hear the opinions of visitors. Or, to use the words of another Irishman, "What might be the raison of anything at all?" The days passed all too swiftly. There were visits to churches, markets, rag fairs, antique shops, and friends. One morning we encountered Professor Tristram, high up on a scaffold in the chancel of St. Finbars, completing the scheme of colour decoration long delayed. There was the memorable visit to the office of H., the well-known architect, whose work adorns South Mall, the brisk exchange of shop talk and tales of local worthies. There is nothing like an architectural holiday to freshen one's ideas. "You should see Kinsale," said H., "real Spanish. It was from thence that James the Second ran off to France."

We were not slow to follow advice to visit Kinsale. The same afternoon the miniature car was on the road again, and the secrets of this historical seaport were assailed. It would be an impertinence to recount all the details of ruined forts, well-kept church, great bow-windowed houses and winding streets. In 1601 Kinsale was in possession of the Spaniards, a sort of retributory attack on this little place after the failure of the Armada in 1588. Perhaps this brief occupation by the Dons accounts for the Spanish mode of wearing the shawl, for in no other place in Ireland save Galway is the tradition of Cadiz and Seville so strong. From the high banks around the harbour you gain magnificent views of the sea and the Old Head of Kinsale. It is, however, the character of the streets which commands most attention, for there you step back into the tranquillity of times when progress was unknown and where advertisements are so conspicuously absent to-day.

This account of a wild tour in Ireland is growing almost as interminable as the bleak stretches of the Irish road between salient ranges of mountains. And now we turn our backs on civilisation to cross the hills at Macroon to visit the Lakes of Killarney, and so by an even more deserted road through Kerry and Ballybunnion. Here, at long last, were the true signs of the primitive handicrafts; the Irish cabins appeared more antique, the reed thatch more fitting, the Kerry carts more appropriate than new-fangled methods of transport. At Listowel night began to fall. We inquired of the "Lartique Railway," and found it had been dismantled ten years since. At Ballybunnion we chanced upon a scene which might have been Broadstairs in the eighteenth century, and a really good hotel. Reader, can you envision the ideal seaside resort? Well, here it is on this wild stretch of Irish coast. Do not expect the glitter of London by the sea; do not look for piers, or bathing pools, cinemas or dog tracks. By way of compensation, there is good cooking, a broad stretch of sand, half a dozen primitive early Victorian, or maybe Georgian, bathing machines on wheels, and as good a view of the Atlantic as you would desire, with Loop Head marking the extremity of the land twenty miles away across the mighty estuary of the Shannon. Certes! there is nothing to equal it, but think of the journey to get there, that is the salvation of the place. And now for Galway, following the round bend of the Shannon by Askeaton and Adare, with visits to ruined castles and monasteries, well cared-for by the Irish Historical Monuments Board. A day in Limerick, where the brick walls testify to the strenuous seige sustained by General Sarsfield against Ginkel, the Dutch leader, and from thence to Galway, the seaport capital of the west. Architecturally, Galway is most interesting. There is the Collegiate Church of St. Nicholas, with the tombs of the chiefs of the numerous craft guilds and the monuments to the tribes. There is the Claddagh, with its age-old houses, once beyond the Pale. There is Lynchs Castle and numerous Spanish-looking buildings which are a delight. And if you desire classicality, there is the Court House, the Piranesian Gaol, and the great hotel which is recognised to be one of Mulvany's best works. To the east lies Athenry, a walled town, and beyond that the road crosses the lime-stone plain through Athlone to Dublin.

One result of an elliptical tour on wheels is that you gain impressions denied to the orthodox traveller. You return to the days of Bianconi tours. You come to an appreciation that Ireland is not dead at all. The tear and the smile never leave the national countenance. It is next to impossible to give impressions in words or sketches of what is really the atmosphere of a country so different from our own. The "easing" air of Ireland is made up of wild west winds that sweep its heaven vaulted skies with large clouds. It is a land lit by a sun that turns distant mountains into pure cobalt and casts portentously deep shadows over lonely boglands. Gold and silver are reflected on clear brimmed lakes and rushing waters; the sunsets are never recorded by mortal hands. Thus it is that all parts of Ireland—north, east, south and west—every quarter from whence the winds come the rains pour and the sun enlivens, change countenance hour by hour, transfiguring distance and producing ineffable charm. As far as the eye can reach moss green and apple green slopes form a mantle to broad stretches of mother earth. Vapour, mist, light and air are in the conspiracy to compensate this age-old island for her conspicuous absence of great trees. And from this natural charm of setting, the humbler architecture, the grandest of all, has taken its cue. It is of the rocks, of the earth and of the rushes, simple and upstanding, part of the woven tapestry of time and the inalienable independence of the Irish people. Something of this strange glamour has descended on Georgian Dublin, which has gathered the human strength to the banks of the Liffey. Here, beneath the shadow of the mountains, inheres the spirit of the Celt. Dublin, with its ancient walls, its legends and its troubled story, enjoys the glamour of a mighty past, wreathing, with the tenacity of hedera helix, the polished classicality of Palladian culture. Some parts of Ireland are popular and others are more primitive, but those who understand the country incline to the silvery gleam of loughs and dark rocky headlands, to the wide spaces jewelled with snug white-limed gables and stumpy chimneys.

THE BELLS OF SHANDON.

THE SLAVERY OF CONVENTION

By EDGAR BERESFORD, F.R.I.B.A.

THE way of the innovator is hard : in building not less than in other spheres of activity. There are many reasons why house-building, in particular, tends to remain stereotyped and unoriginal, some of them understandable and natural, others quite illogical and absurd. And often it seems very difficult—if not, indeed, impossible—to make even the most reasonable advances from traditional or conventional arrangements.

To begin with, public taste generally is largely compounded of a hidebound conservatism which embodies an intense distrust of anything at all novel or original. Even normally intelligent people have the most appalling prejudices in regard to their own habitations. They will subscribe gladly and enthusiastically to the latest theories about diet or clothing or hygiene, but when it comes to a question of the houses they inhabit they seem to be incapable of escaping from the dead hand of conventional propriety and fear to embody in their houses and furnishings the principles which in other respects they so wholeheartedly profess. For instance, houses placed, for the sake of propriety, to face the roadway, in complete disregard of the best aspect to catch the sun, are equipped lavishly with Vita glazing, the beneficial effects of which are largely nullified by the planning which enables few windows to enjoy the best of the sun. Amongst architects it has long been agreed that of all considerations which have to be first observed in determining the plan of a house, the most vital is that of aspect. For years it has been an accepted axiom that every habitable room shall, during some portion of the day, be open to direct sunlight, whenever this is available. But, in suburban areas particularly, this most desirable of all attributes is ignored because convention still stipulates that, whatever the direction of the road, houses must face it.

This convention is based on the old urban traditions of display and pretension which, one would think, in these days of upheaval and changed values, had long been exploded. But even more, it seems, it is the result of building regulations.

Let us imagine an average narrow suburban building site of some 60 ft. width, and extending from the main frontage road on the west some 150 ft. to another road on its eastern end. We wish to build a semi-detached pair of houses. The traditionally accepted method will be to place our block parallel to the western road, with main rooms facing it. We may, in fact, occupy the whole frontage, building blank walls at each end. Our rooms then must have either east or west aspect. Houses so planned can comply with the by-law which stipulates for so many feet of clear parallel air space in front and at the rear of the building, in order—as it runs—"to secure a free circulation of air," this being apparently secured when doors and windows are opened, allowing through ventilation from front to rear.

Now imagine that we do not care for east and west lighting only : that we would prefer to look out from our best windows on to a garden rather than on to a suburban road : and that we have a commonly-held notion that direct sunlight from the south is of greater value than from any other compass-point, and far more likely to promote mental and bodily health than is possible from the more usual and hackneyed outlook. "Happy Thought!" (as Sir Frank Burnand used to say). Let us turn our block of houses round at right angles to the roadway. Our main front can thus face the direct south, and if we keep fairly close to the northern boundary our garden also will lie to the south. We can also place windows in the ends of our building, obtaining the benefits of early morning and late afternoon sunshine in addition to our midday exposure : in fact, we can take advantage of the sun every hour in which it is visible. On our north side we can place kitchens, larders and other rooms in which sunshine is not necessary or desirable. At the same time we can feel that in thus satisfying all these essentially practical claims of aspect, we are also getting away from the obvious "ribbon development," leaving a gap for air and trees between our neighbours and ourselves, and, incidentally, feeling a little proud of our defiance of the usual tradition of conformity.

Then will come a nasty jar, for the surveyor to the local authority, on receipt of our plans, may point out that they do not comply with the regulations; in fact, that they are in direct contravention with "No. So-and-so" by-law, which is headed : "With respect to the sufficiency of air about buildings to secure a free circulation of air, and with respect to the ventilation of buildings." But, we may reply, aghast, you would pass this block the other way about, even though it were tightly wedged, with blank ends, between the adjoining properties and had windows east and west only, whereas now we propose to stand clear of all neighbours and to have windows on all four sides! His rejoinder will be to point out that a semi-detached block is one thing and a "back-to-back" block is quite another, although identical in form! And he may even go on to explain that "through ventilation" is impossible, since the space at the rear, which should be open, is occupied by the twin house of the pair. He will not, of course, admit that the "front" of the house can be any other than that nearest to the roadway : but it will not help to suggest that the main long front (which you want to face south) should be considered as the "front," because your plot-width is not enough to provide the statutory open space in that direction.

Building by-laws, excellent in some respects, suffer inevitably from the fact that they are not, and cannot be, universally applicable. They were designed originally to prevent bad building; they seem often to prevent, just as effectually, good building. Certainly, they invariably are directed to regulate ordinary stereotyped work : it is inevitable that they must concern themselves with the usual and make little provision for the unusual, though their interpretation might surely permit of some little latitude when the objects of the regulations are unquestionably achieved, even though the letter of the law be transgressed.

It is quite obvious that the regulations regarding open spaces at front and rear were framed in order to secure ample light and ventilation to terrace houses, built in continuous rows. As it is there impossible to have windows at the ends, front and back must be open for full width. But it is equally obvious that any building having three of its four sides open and windowed must have a better circulation of air about and through it than one which has only two open sides. What possible significance can it have to determine which of the three sides is front or rear? Yet as the by-law stands, and if unfortunately it is interpreted by the authorities to the very letter, a house may have a hundred feet in front and at each side of it, yet be condemned unconditionally if its "rear" wall is blank or in any way obstructed. Could absurdity go further?

At a recent meeting of the R.I.B.A. a speaker consoled himself by remembering that many modern designs which he personally detested would never be built in this country, since the local authorities would promptly refuse to pass them for erection. This conception of the building by-laws and their administrators as the guardians of Merrie England against the brutalities of modernistic innovators is rather an original one, and gave rise to some amusement and a little protest. There is, however, a germ of truth in it, for there can be little doubt that in the slavery of convention, which still is such a curse in the realm of building, one of the strongest shackles is the interpretation and administration of by-laws which, excellent in their day and generation, have long proved inadequate, impractical and effete.

Councils and their officials are given large and sweeping powers for a definite and laudable purpose : that is, to secure in new buildings the most intelligent, up-to-date and healthy conditions. Any scheme submitted to them which on its own merits promises to provide sound and sane housing deserves, surely, a careful consideration in the broad light of reason, and if the spirit of the by-laws and of public health and decency is satisfied, we cannot believe that the letter of the law matters in the least.

MODERN HOMES EXHIBITION, GIDEA PARK

At the invitation of the promoters, we have viewed the prize-winning designs in this competition, in which no fewer than 475 architects submitted schemes. The competition has proved an unqualified success, and the exhibition of the completed houses, some 35 in number, will take place from July 31 to August 20, when every facility will be made for their inspection. Each house will be complete, and each architect will be required to lay out the garden of his respective house or houses. In addition there will be a further competition for garden lay-outs.

The awards were published in our issue for December 8. The assessors were :—Professor S. D. Adshead, F.R.I.B.A., and Messrs. A. E. Beresford, F.R.I.B.A., Alderman Ewart G. Culpin, J.P., F.R.I.B.A., E. Maxwell Fry, A.R.I.B.A., Howard Robertson, F.R.I.B.A., and W. Harding Thompson, F.R.I.B.A.

In the course of their report the assessors state that "largely on account of the freedom allowed by the conditions in the matter of construction and design, the competition produced sets of drawings rising to unusual levels of skill, and advancing contemporary standards of house design to a degree which will only be properly appreciated when the selected houses are finally built.

"The competition marks a departure from hitherto adopted traditions of design. A big majority of drawings, for good and in some cases for less good reasons, 'went modern.' A smaller number of these substantiated their claim to set up new contemporary standards. It is a matter for congratulation that this number should be as considerable as it is, and its standards of design so high.

"Reviewed in general, schemes fall in four divisions.

"(1) Designs of traditional character, with pitched tile roofs and smallish Georgian or cottage-type windows.

"(2) The 'mock-moderns'; schemes that exhibit the tricks but not the logic of good contemporary design. Most but not all of this class were eliminated from the final round.

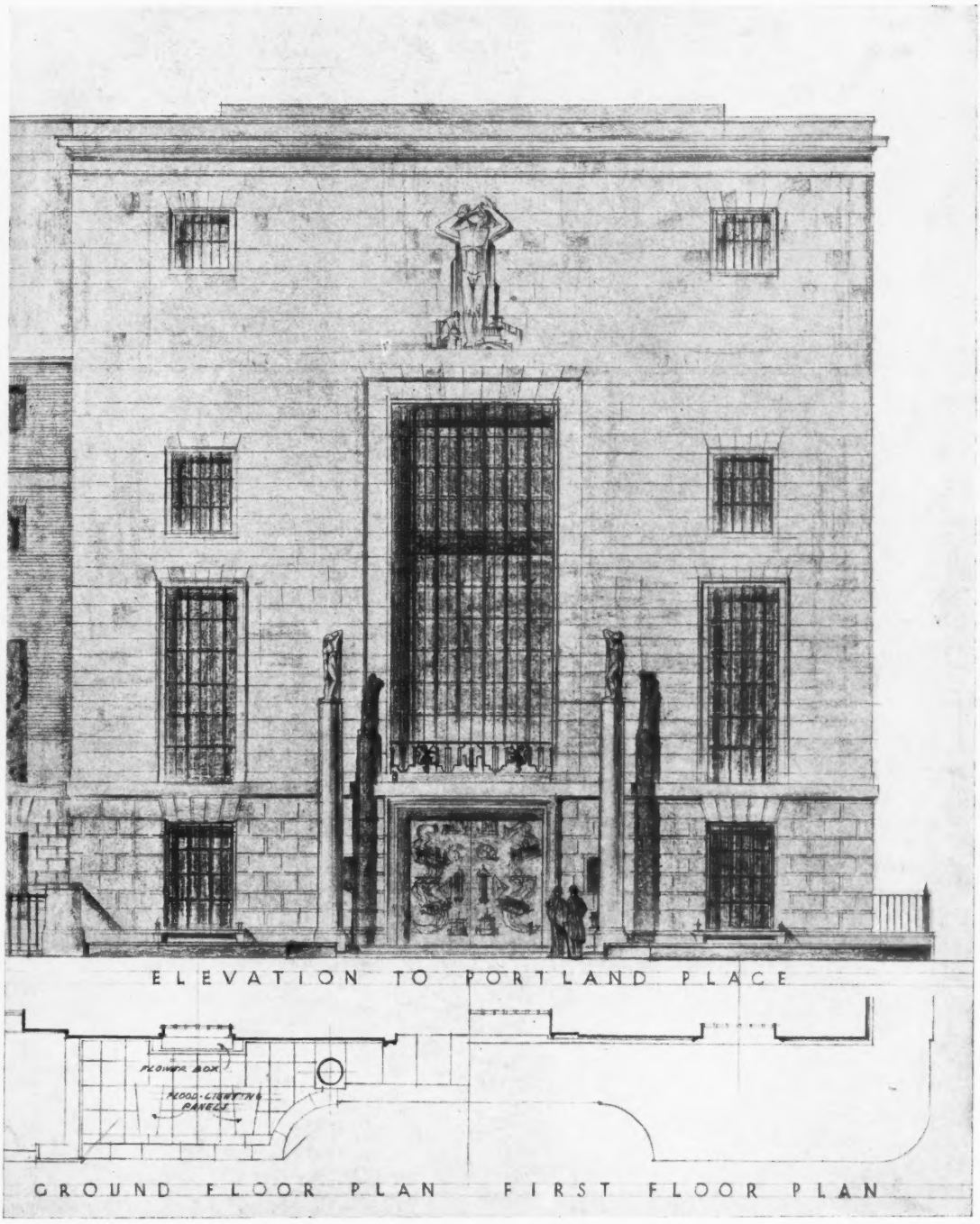
"(3) A relatively large group of designs employing traditional materials and construction in the form of flat roofs of timber and asphalt, large window openings and free and more open planning. This group represents an intelligent compromise between old and new methods, and shows a very distinct contribution towards small house design.

"(4) Two designs, one in the cheapest and one in the most expensive type, offering a complete departure from traditions both in plan, construction, and consequently in general design. The 'plastic' qualities of reinforced concrete have enabled the designers to plan on a basis of the exact functioning of the domestic machine. The completed houses will prove both an acid test of the designers' plan, and a means of judging the public's reaction to adventurous building.

"The competition was expressly for *modern* homes, and reference was given as far as possible to designs avoiding the hackneyed and stereotyped designs so universal in small house building.

"Good plans and elevation do not always go together, and more than one charming exterior was rejected on account of wasteful planning; but in (3) and (4) above, planning and design were combined in very satisfactory partnerships. A large number of competitors had carefully considered the placing of furniture as well as that of 'built-in' equipment with considerable benefit to their detail planning."

Ja



THE R.I.B.A. NEW PREMISES, PORTLAND PLACE, W.

MR. G. GREY WORNUM, F.R.I.B.A., Architect.

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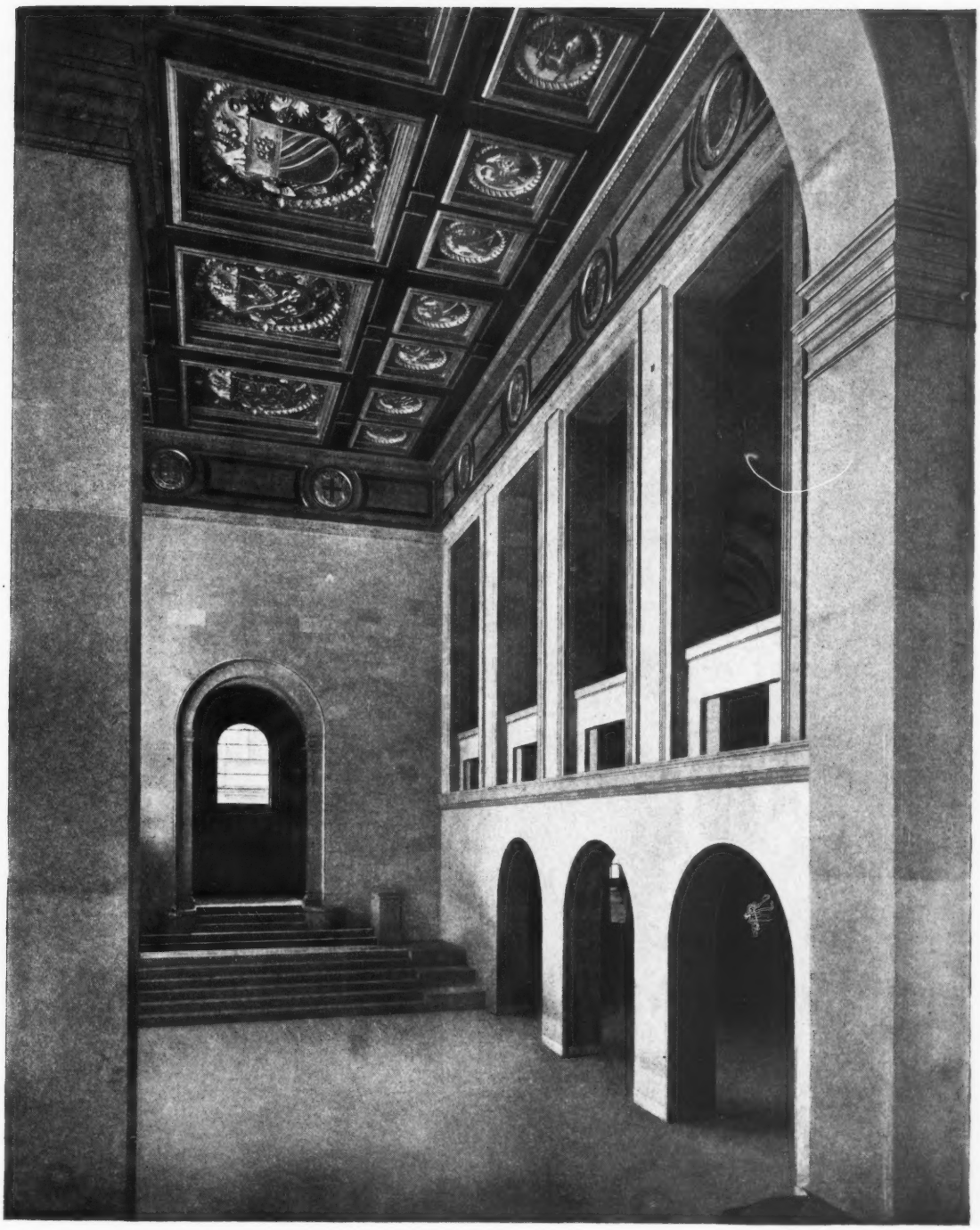

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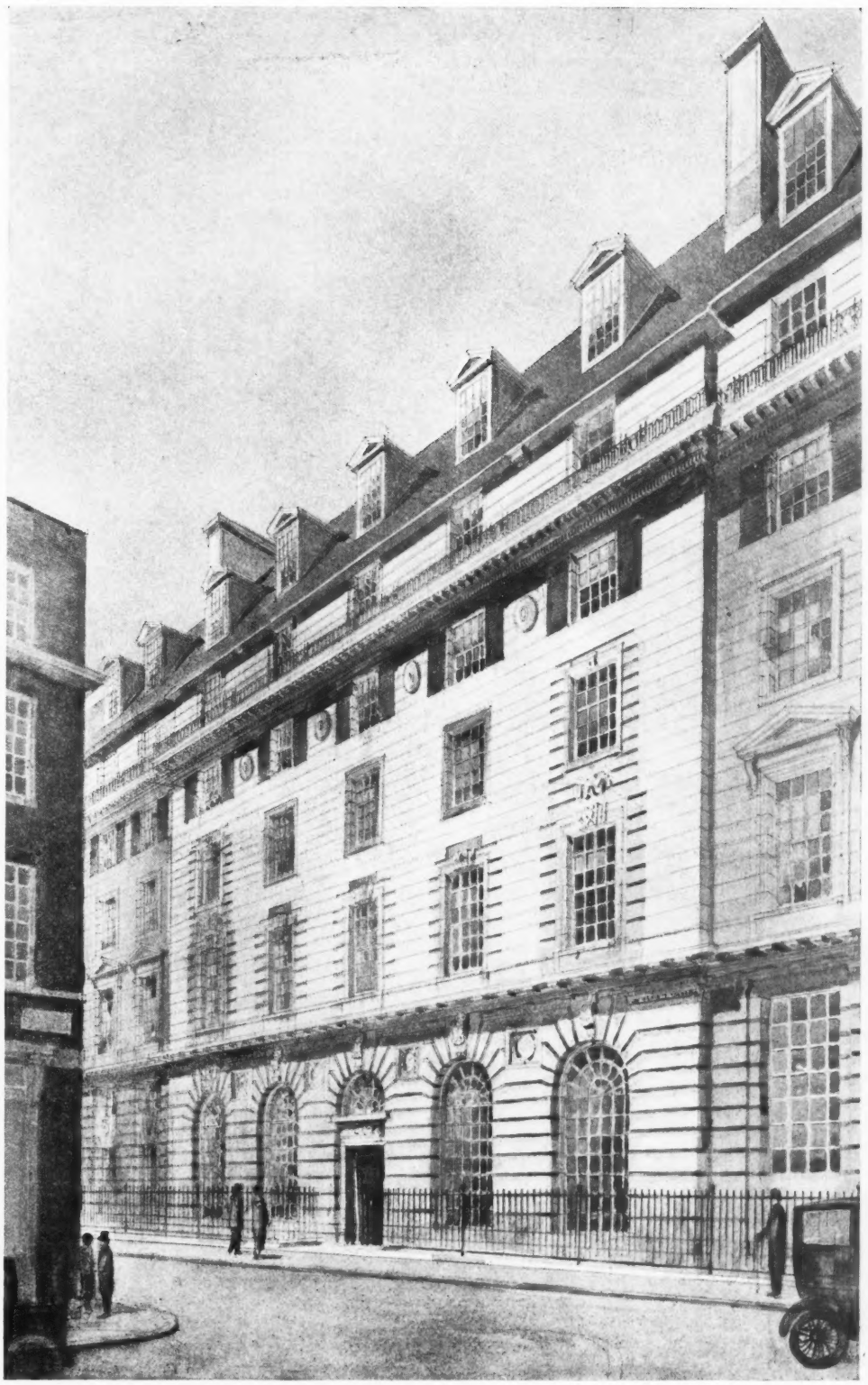
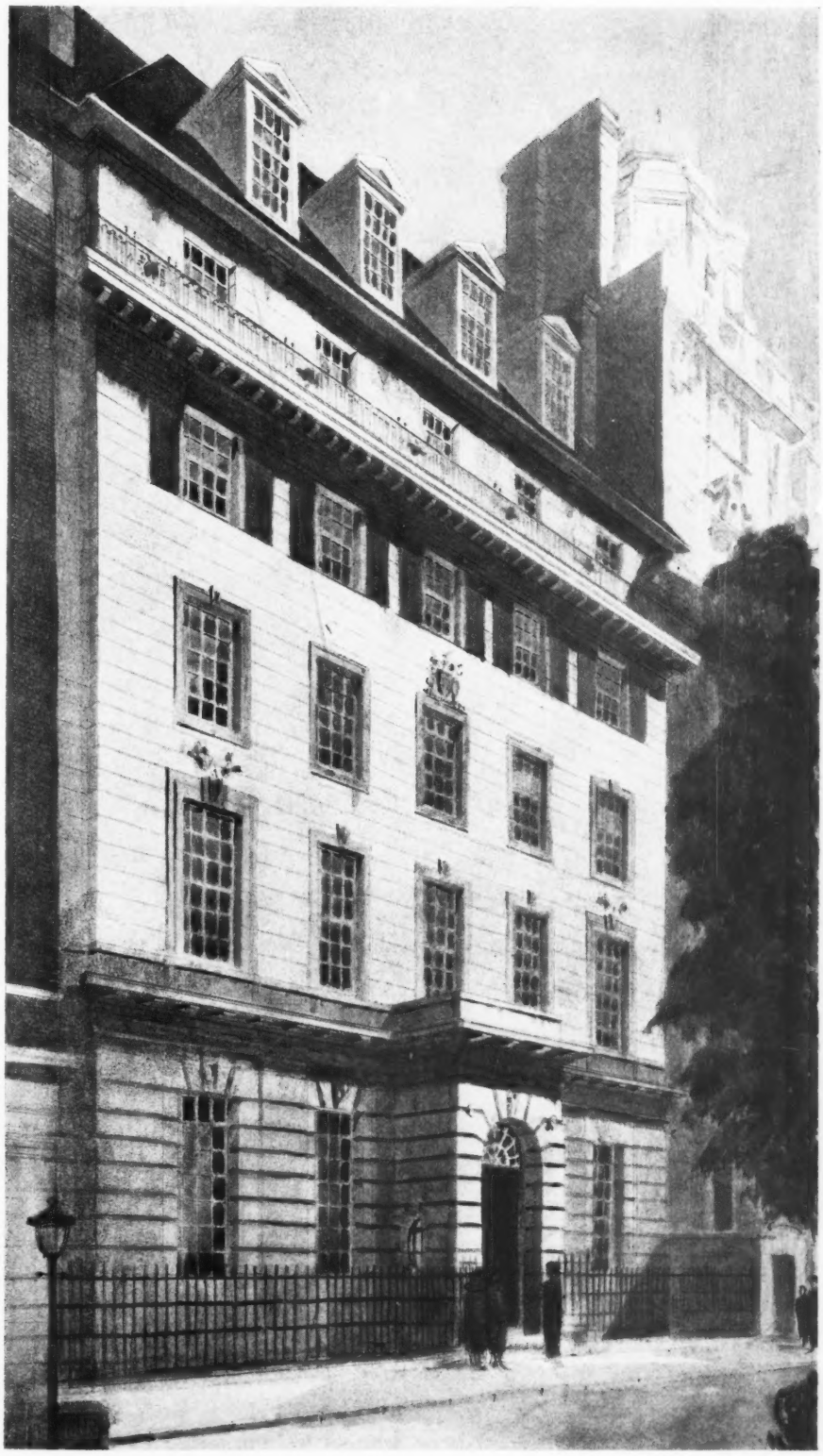


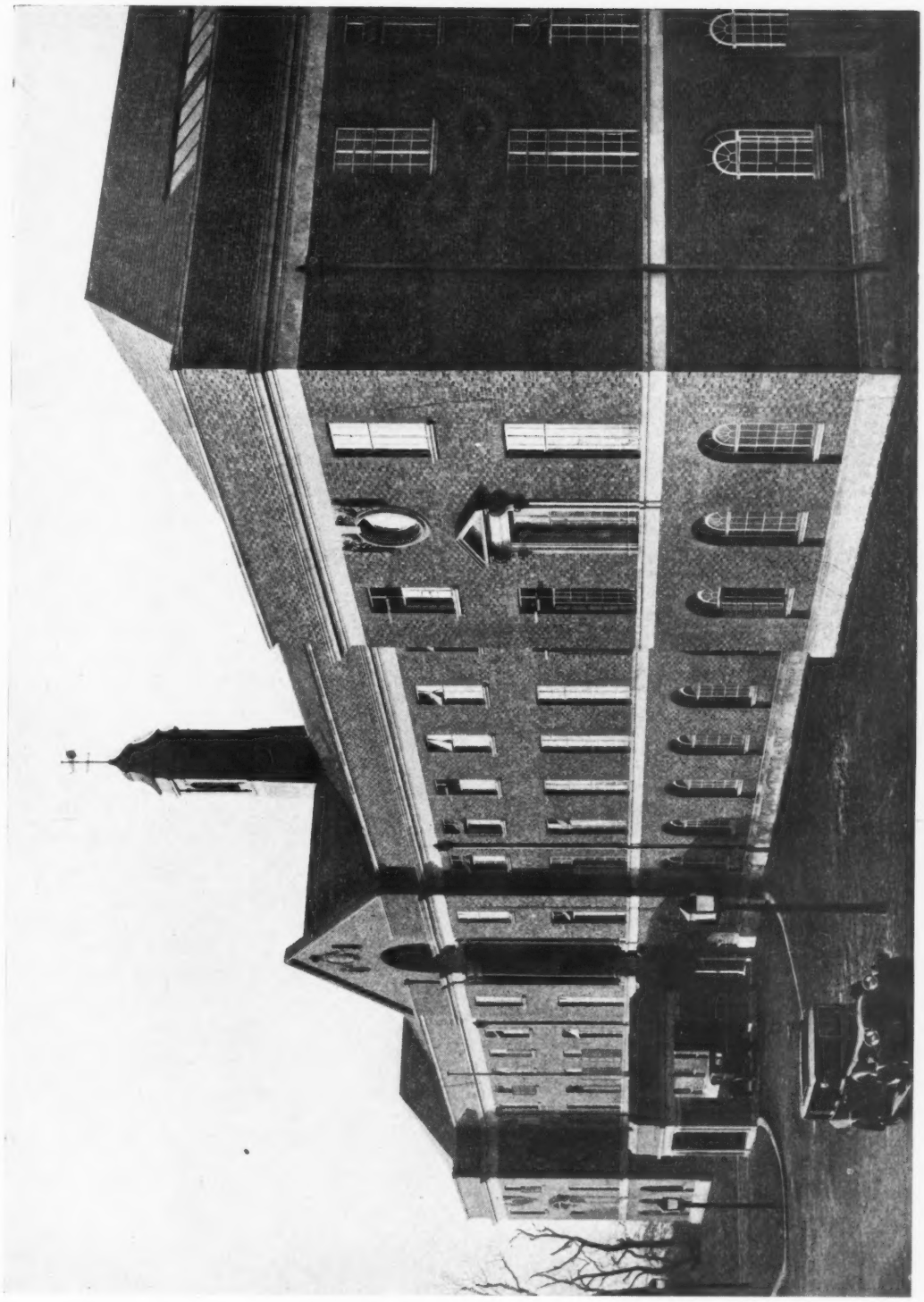
THE COLLEGE OF NURSING: Elevation to Henrietta Street, W.

SIR EDWIN COOPER, A.R.A., Architect.

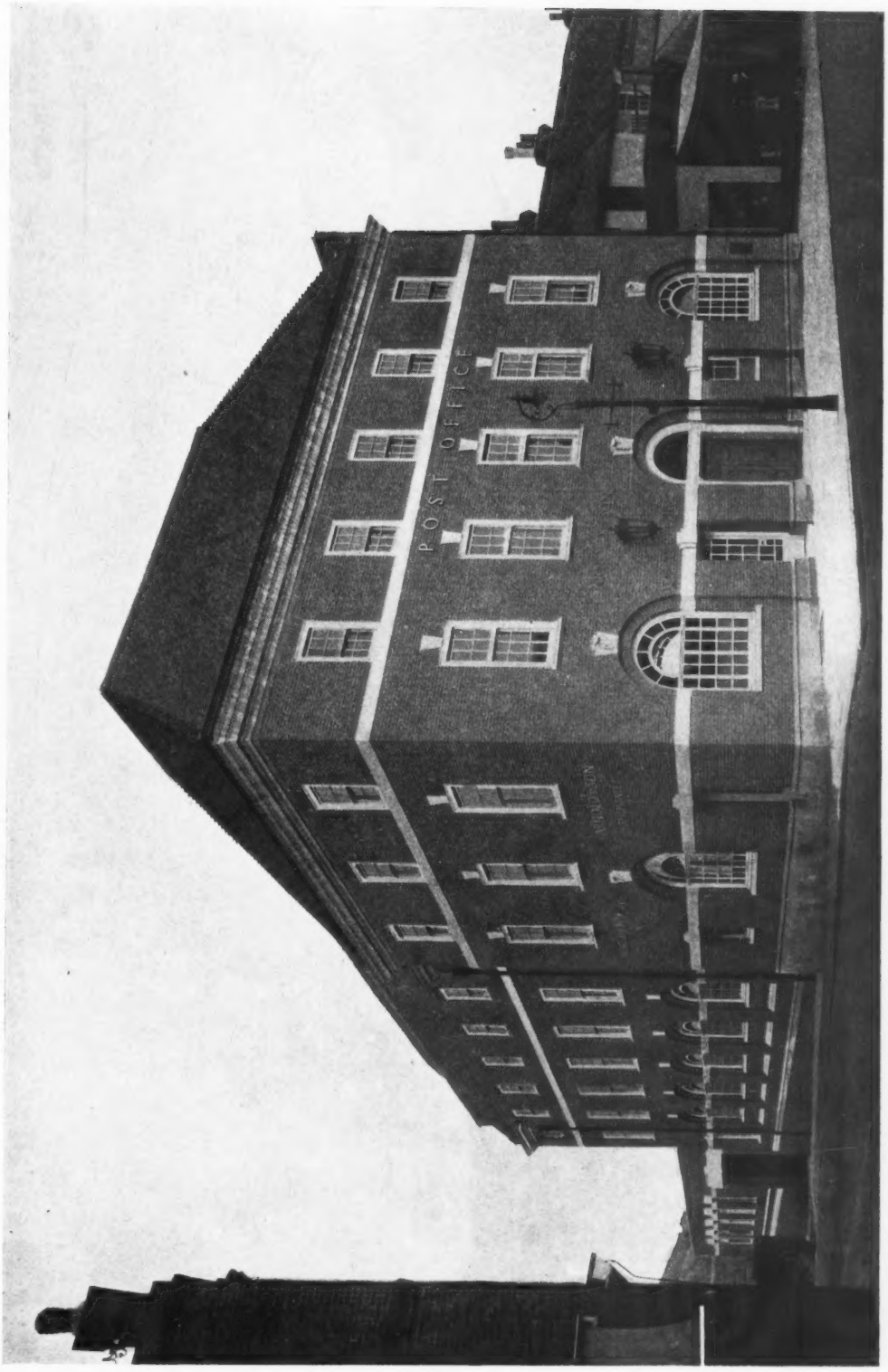


THE COLLEGE OF NURSING: Elevation to Cavendish Square, W.

SIR EDWIN COOPER, A.R.A., Architect.



DOLLIS HILL POST OFFICE RESEARCH STATION: General Research Block.
MR. A. R. MYERS, O.B.E., A.R.I.B.A., F.S.I. (H.M. Office of Works), Architect.



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Supplement to "The Builder," January 12th 1934.

SHOWING THE BOUNDARIES OF THE

SURVEYORS' DISTRICTS UNDER THE BUILDING A
and TOWN PLANNED AREAS

ACTS

"THE BUILDE

OF THE

COUNTY OF L

ILDER" MAP
OF THE
OF LONDON

THE

NAMES AND ADDRESSES

No.	District	Name	Address
1	Battersea	LANE, A.	233, Lavender Hill,
2	Bermondsey	MESTON, A. C.	Bank Chambers, To Tooley Street, S.E.
3	Bethnal Green	MENNIE, F. E.	1, Montfort House, W Square, E. 2.
4	Camberwell, North	LING, R. B.	32, Camberwell Grov
5	Camberwell, South	PRATT, D. W.	166, Rye Lane, S.E.
6	Chelsea	HALL, G. M.	4, Sydney Street, S.W
7	City of London, East	CUBITT, H. W.	7, Camomile Street,
8	City of London, West	MAYHEW, A. E.	Ludgate House, 10 E.C. 4.
9	Deptford	DEAN, R. R. S.	329, New Cross Roa
10	Finsbury	DOVASTON, J.	410, St. John St., Fin
11	Fulham	ROGERS, W. H.	Broadway House, Th Fulham, S.W. 6
12	Greenwich	TINSLAY, T. P.	Borough Hall, Roya Greenwich, S.E. 10
13	Hackney, East	CHANTER, H. R.	Westminster Bank 20, Amhurst Rd.,
14	Hackney, West	WHINCOP, W. G.	133, Stoke Newingt N. 16
15	Hammersmith	WOODWARD, A. L.	18, Queen Street, Th Hammersmith, W
16	Hampstead	WHYTE, D.	305, Finchley Road,
17	Holborn	PERKINS, W. G.	11, Gray's Inn Squa
18	Islington, East	PEARSON, F. G.	407, Holloway Road
19	Islington, West	LEES, E. W.	407, Holloway Road
20	Kensington, North	TOLLEY, G. (Interim)	118-120, Westbourne
21	Kensington, South	BLACK, P. J.	113, Earl's Court Ro

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SES OF DISTRICT SURVEYORS (with Reference Numbers to Map)

DDRESS	TELEPHONE
r Hill, S.W. 11	Battersea 4218
bers, Tower Bridge, ect, S.E. 1	Hop 0558
louse, Victoria Park 2	Advance 3437
ell Grove, S.E. 5. ...	Rodney 2120
e, S.E. 15	New Cross 4244
eet, S.W. 3.	Flaxman 2115
Street, E.C. 3	Avenue 8711
use, 107, Fleet St., ...	Central 4622
ss Road, S.E. 14	New Cross 0890
St., Finsbury, E.C. 1	Clerkenwell 9232
ouse, The Broadway, W. 6	Fulham 2390
l, Royal Hill, S.E. 10	Greenwich 0155
Bank Chambers, t Rd., Hackney, E.8 ewington High St., ...	Amhurst 4302
eet, The Broadway, nith, W. 6.	Clissold 7685
Road, N.W. 3	Riverside 0922
n Square, W.C. 1 ...	Hampstead 4867
y Road, N. 7	—
y Road, N. 7.....	North 5609
bourne Grove, W.11	North 1561
urt Road, S.W. 5 ..	Bayswater 1178
	Frobisher 4739

No.	DISTRICT	NAME	ADDRESS	TELEPHONE
22	**Lambeth, North**	WATSON, F. P.	69, Kennington Oval, S.E. 11....	Reliance 2185
23	**Lambeth, South**	HOSKING, T. S.	395, Norwood Road, S.E. 27	Streatham 6370
24	**Lewisham, East**.....	GIBSON, T. R. L.	7, Princes Road, Blackheath Rise, S.E.	Lee Green 1507
25	**Lewisham, West**	VERSTAGE, A. H.	211, Stanstead Road, Forest Hill, S.E. 23.....	Sydenham 5230
26	**Paddington**	TOLLEY, G.	118-120, Westbourne Grove, W.11	Bayswater 1178
27	**Poplar**.....	KENNARD, C.	143, Bow Road, E. 3.....	Advance 2124
28	**St. Marylebone, East**....	GREIG, B.	1, Newman St., Oxford St., W. 1	Museum 0681
29	**St. Marylebone, West** ..	BROMLEY, H. T.	104, Clifton Hill, St. John's Wood, N.W. 8	Maida Vale 2309
30	**St. Pancras, North**	WATKINSON, H. E.....	272, Kentish Town Road, N.W. 5	Gulliver 1626
31	**St. Pancras, South**.....	YOUNG, H. H.	14, Percy Street, W. 1	Museum 1867
32	**Shoreditch**.....	KNOWLES, C. C.....	124, Shoreditch High Street, E. 1	Bishopsgate 9255
33	**Southwark**	MAYHEW, R. H. J.	14-16, New Kent Road, S.E. 1....	Rodney 3393
34	**Stepney, East**	FISHER, E. J.	1, West Arbour Street, Commercial Road East, E. 1	East 1109
35	**Stepney, West**	BARKER, F. W. C.....	130, Whitechapel High St., E. 1	Avenue 7480
36	**Stoke Newington**	WHINCOP, W. G. (Interim)	133, Stoke Newington High St., N. 16.....	Clissold 7685
37	**Wandsworth, North**....	WALKER, I. D.	188, High St., Clapham, S.W. 4..	
38	**Wandsworth, East**.....	KING, R. H.	229A, Streatham High Rd. S.W. 16.	
39	**Wandsworth, West**.....	ELTON, P. I.	85, High St., Wandsworth, S.W. 18	Battersea 4537
40	**Westminster, East**	FILLARY, A. A.....	60, Haymarket, S.W. 1.....	Whitehall 4553
41	**Westminster, West**	SURREY, C. W.	29, Maddox Street, W. 1.....	Mayfair 1142
42	**Westminster, South**....	SHINER, L. A. D.....	44, Queen Anne's Gate, S.W. 1...	Victoria 5386
43	**Woolwich, North**	HANDLEY, A. L.	21, William St., Woolwich, S.E. 18	Woolwich 1364
44	**Woolwich, South**	GRIFFITHS, R. C.	6, Park Place, Eltham High St., S.E. 9	Eltham 2255

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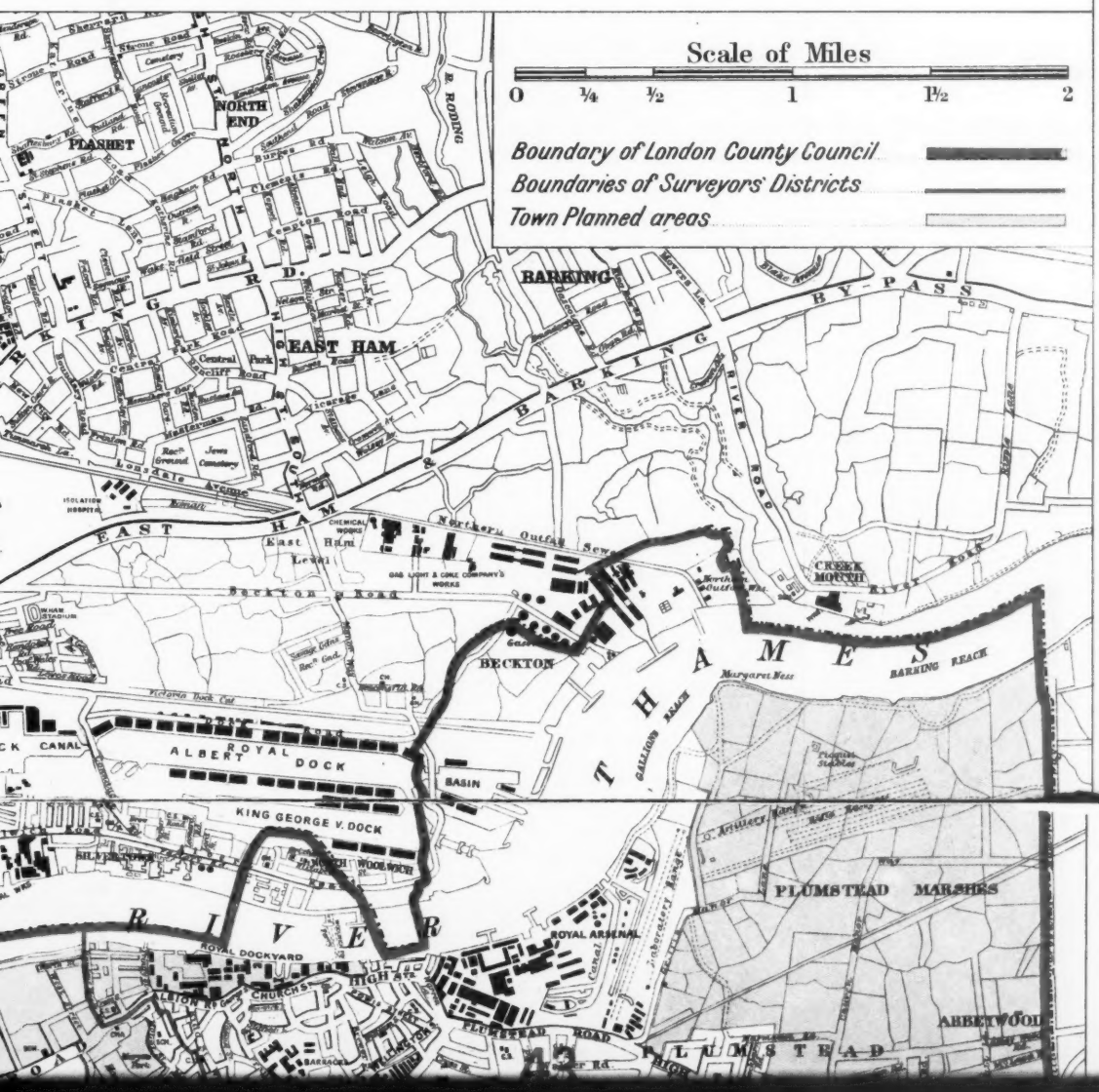

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NORWOOD NEW TOWN
UPPER NORWOOD
UPPER SYDENHAM
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Peckham Rye Cemetery
Dulwich Cemetery
Norwood Cemetery
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Maudsley Hospital
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Gas Works
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Kennington Park
Kennington Oval
Brixton Road
Clapham Road
Clapham Common
Clarence Road
Acre Lane
Water Lane
Dulwich Road
Dulwich Village
Dulwich Common
Knights Hill
Thurlow Park Road
Norwood Road
Westow Hill
Church Street
Peckham High St
Queens Road
New Cross Road
Lewisham Road
Rotherhithe New Road
Southwark Park Road
Jamaica Road
Tower Bridge Road
New Kent Road
Borough High St
Albany Road
Camberwell New Road
Camberwell Church St
Coldharbour Lane
Rye Lane
Peckham Rye
Barry Road
Stanstead Road
Brockley Rd
Sydenham Road
Crystal Palace Parade
Anerley Road
Trinity Road
Beulah Hill
Elder Road
Crown Lane
Streatham Hill
Streatham Common
Tooting Bec Rd
Tooting Bec Common
Tooting Bec Gdns
Balham Grove
Balham Hill
Atkins Road
Clarence Rd
Norwood Rd
Thurlow Park Rd
Knights Hill
Dulwich Village
Dulwich Common

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PECKHAM RYE PARK
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LEWISHAM
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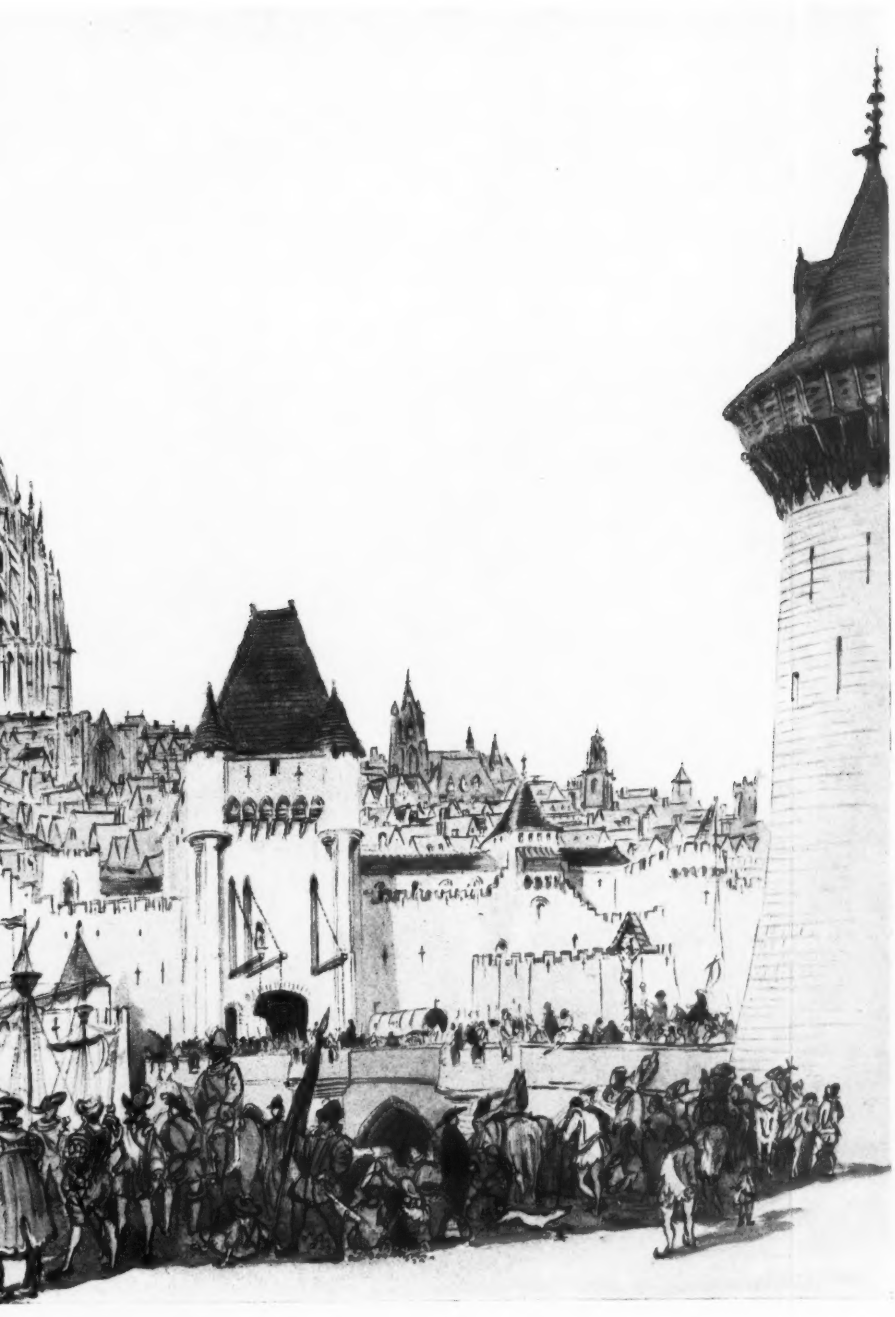

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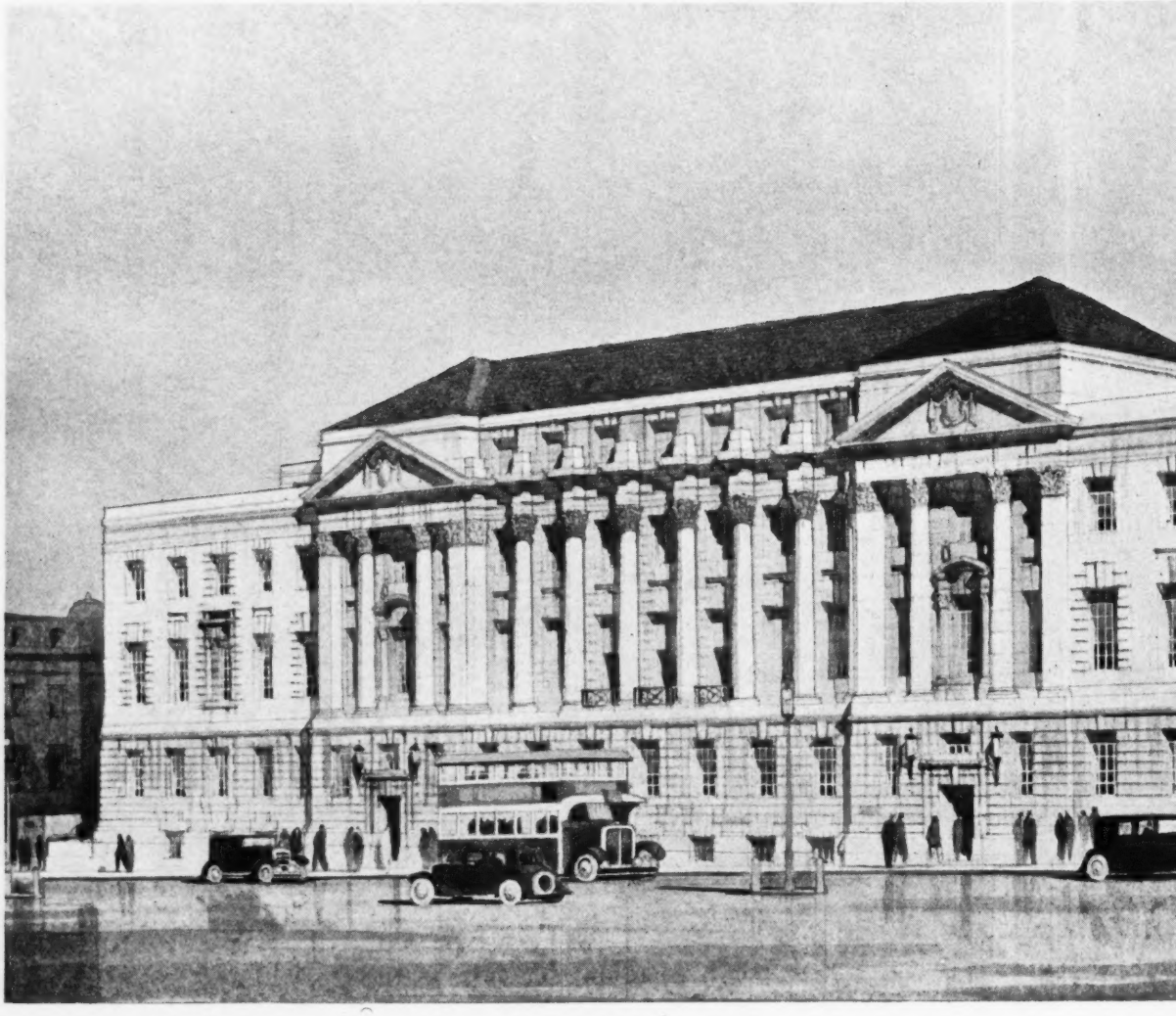
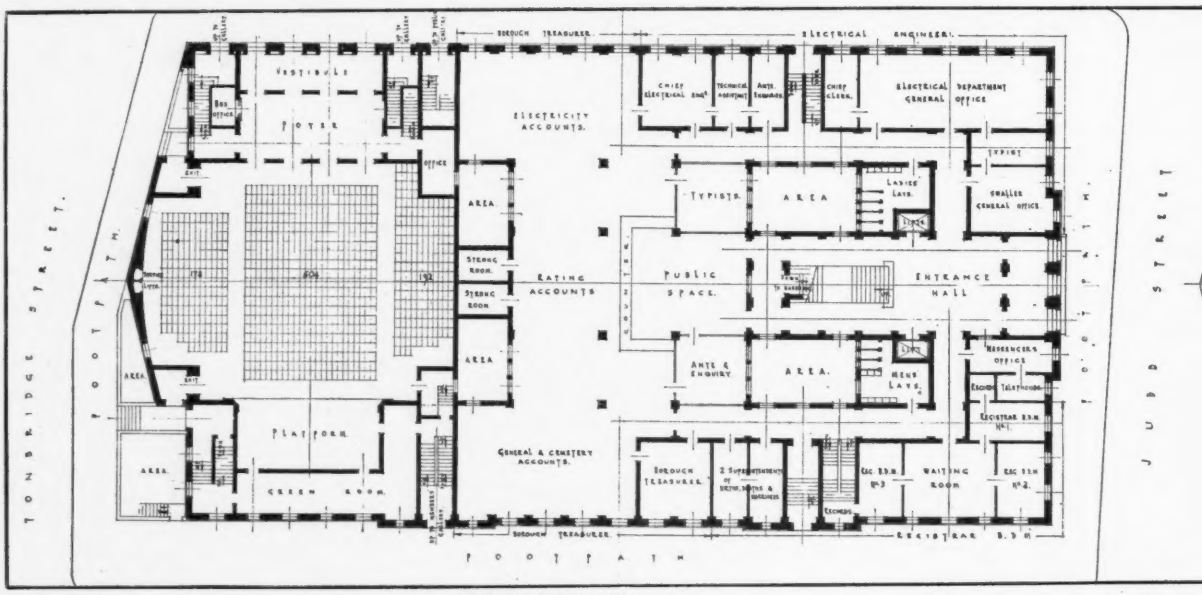
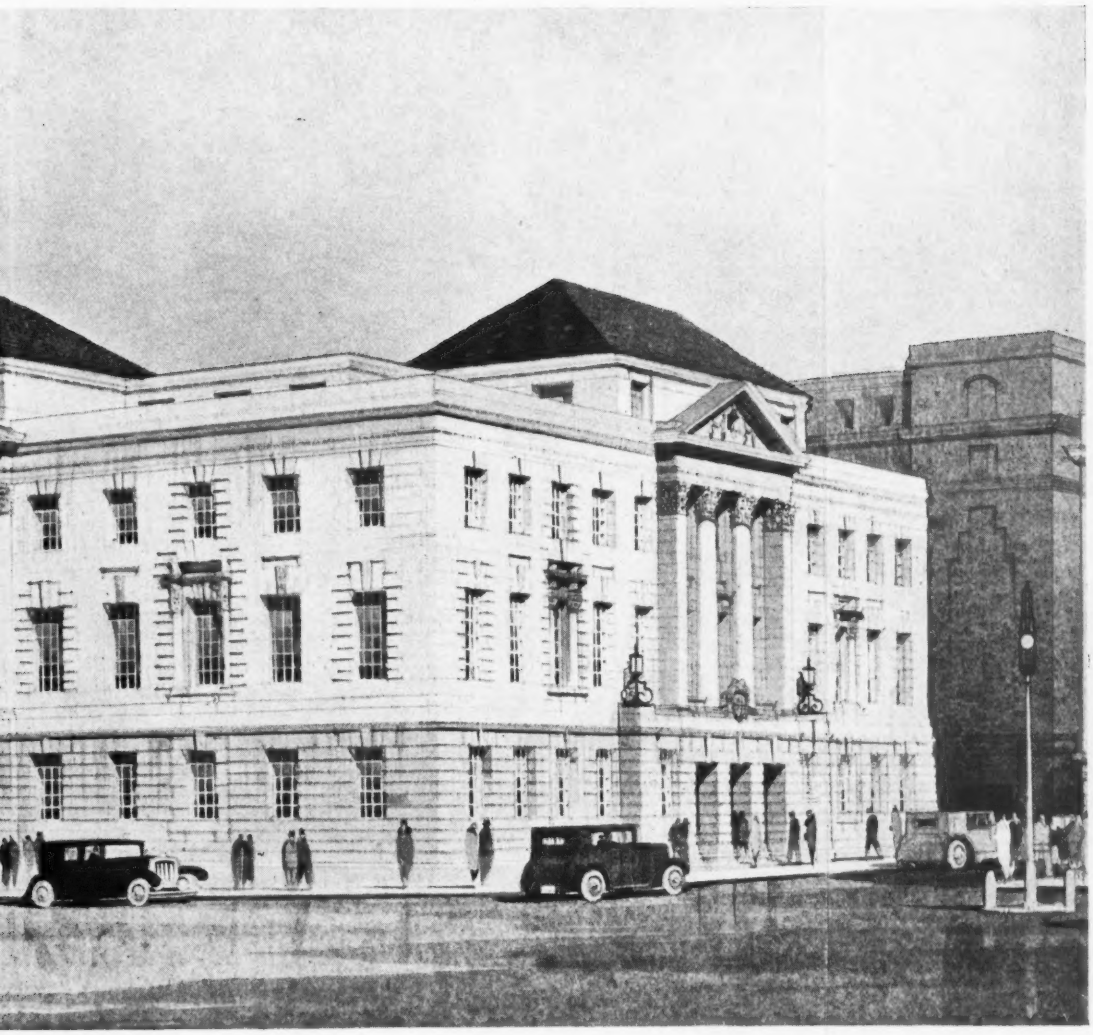


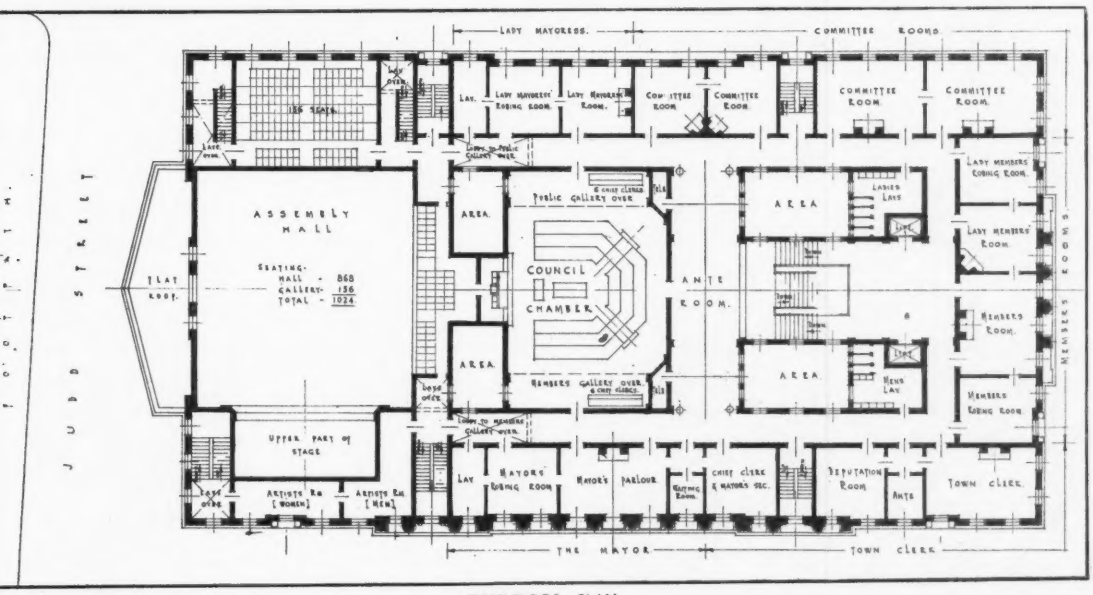


GROUND-FLOOR PLAN

ST. PANCRAS TOWN HA

MR. ALBERT J. THOMAS, F.R.I.B.A., A





FIRST-FLOOR PLAN.

S TOWN HALL.

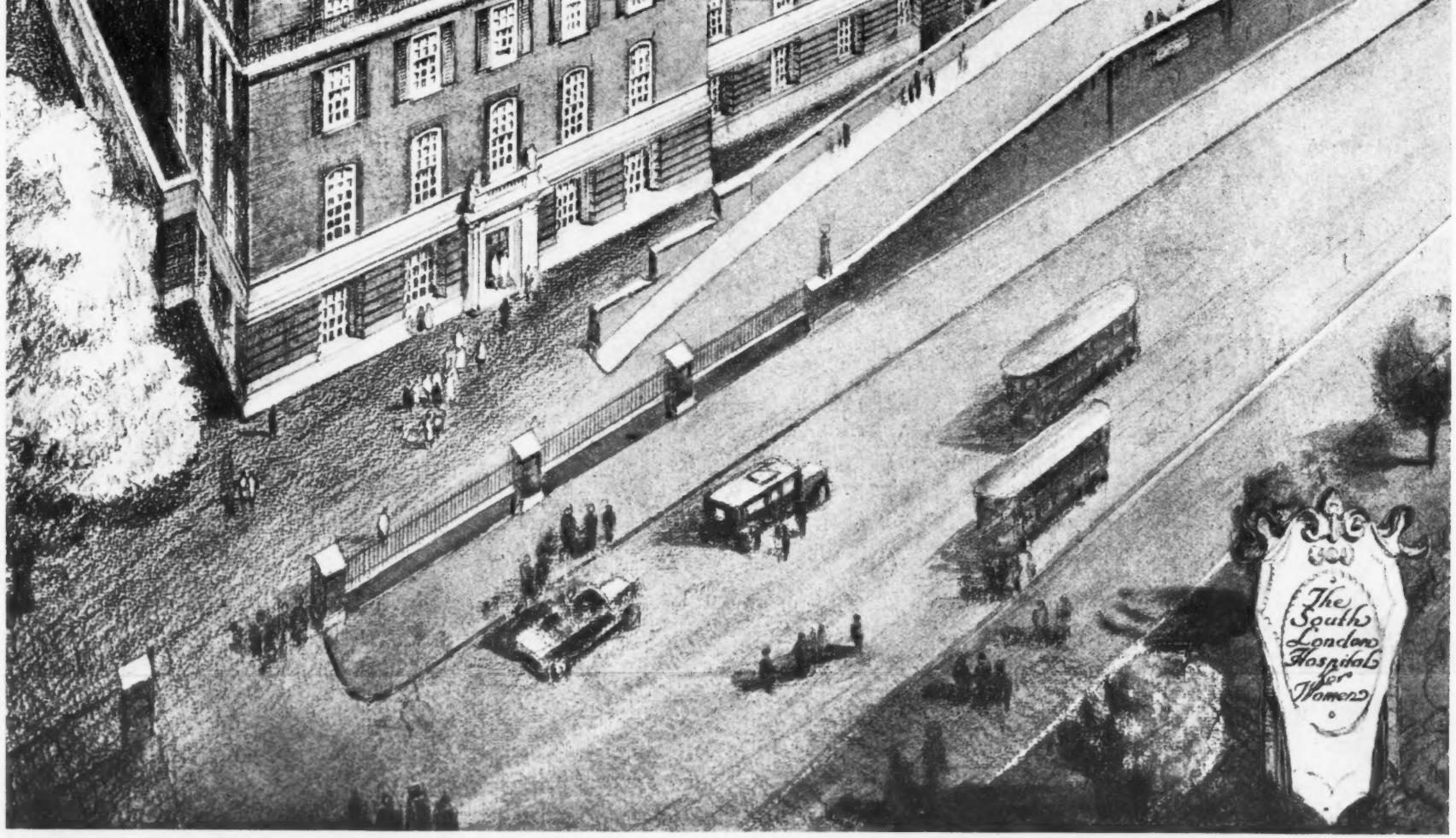
MAS, F.R.I.B.A., Architect.

COMPLETION OF THE DEVONPORT NURS

SIR EDWIN COOPER, A.R.A., A

NPORT NURSES' HOME, GREENWICH.

OOPER, A.R.A., Architect.



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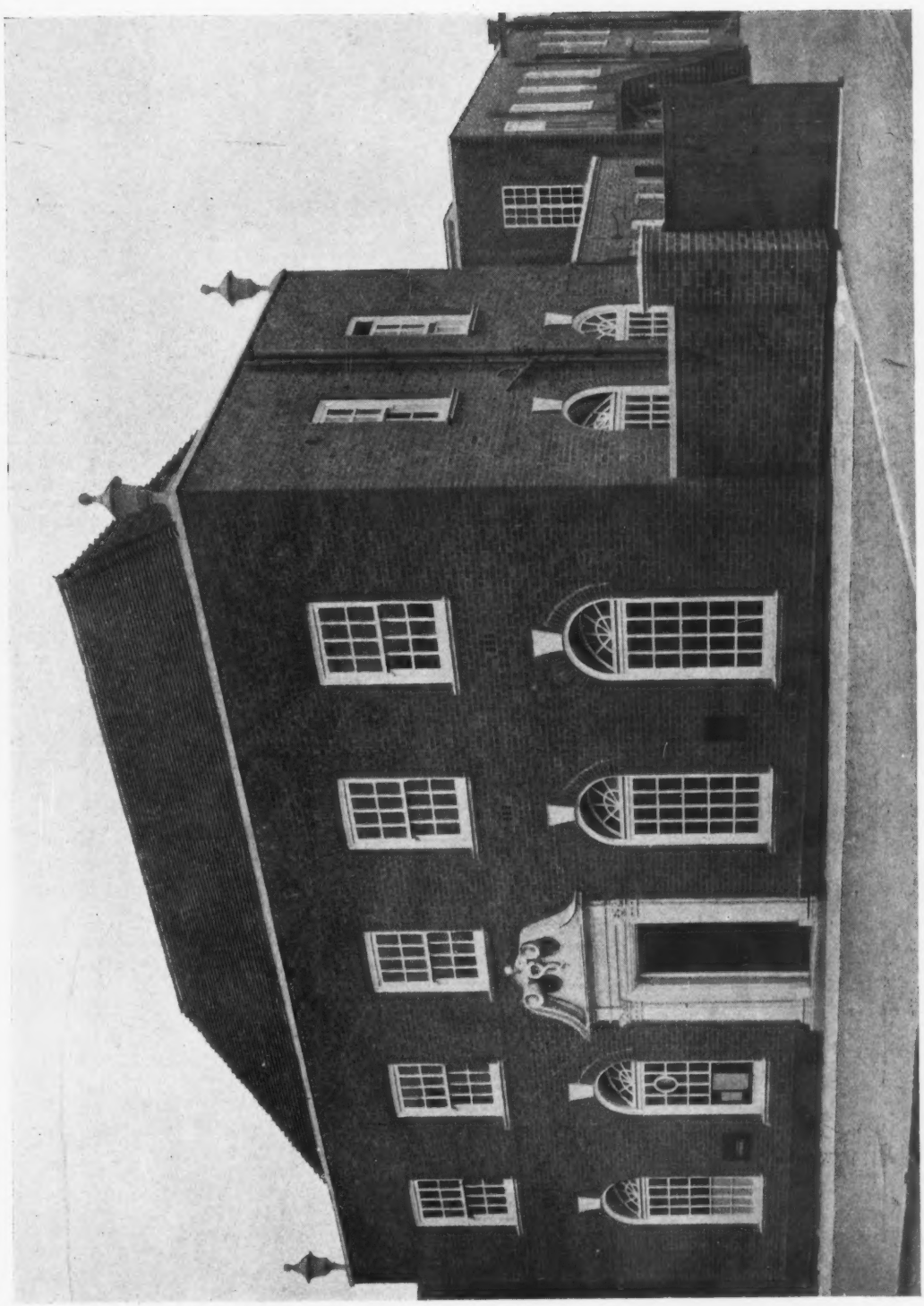
SIR EDWIN COOPER, A.R.A., Architect.



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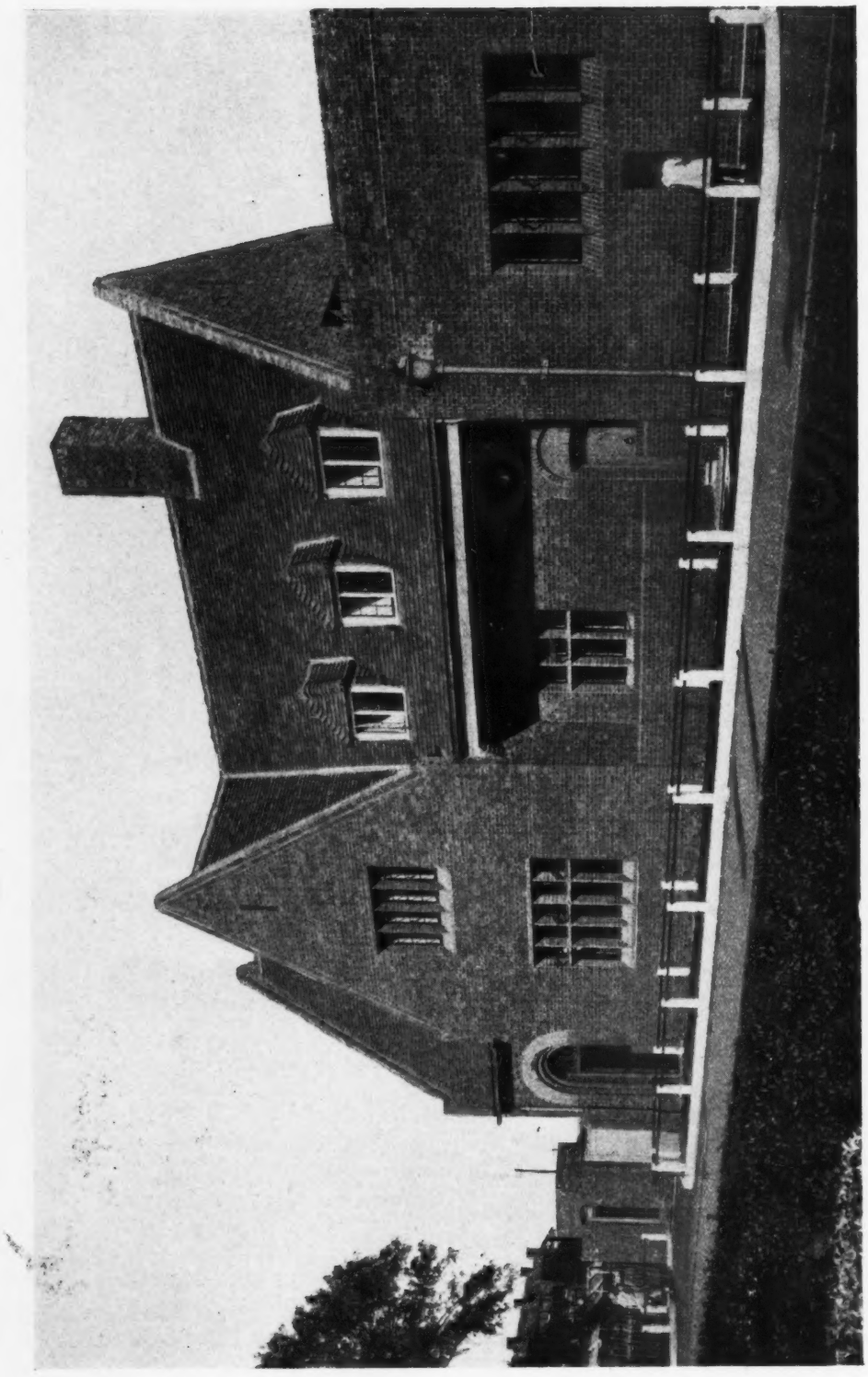
MR. A. SCOTT, F.R.I.B.A. (H.M. Office of Works), Architect.



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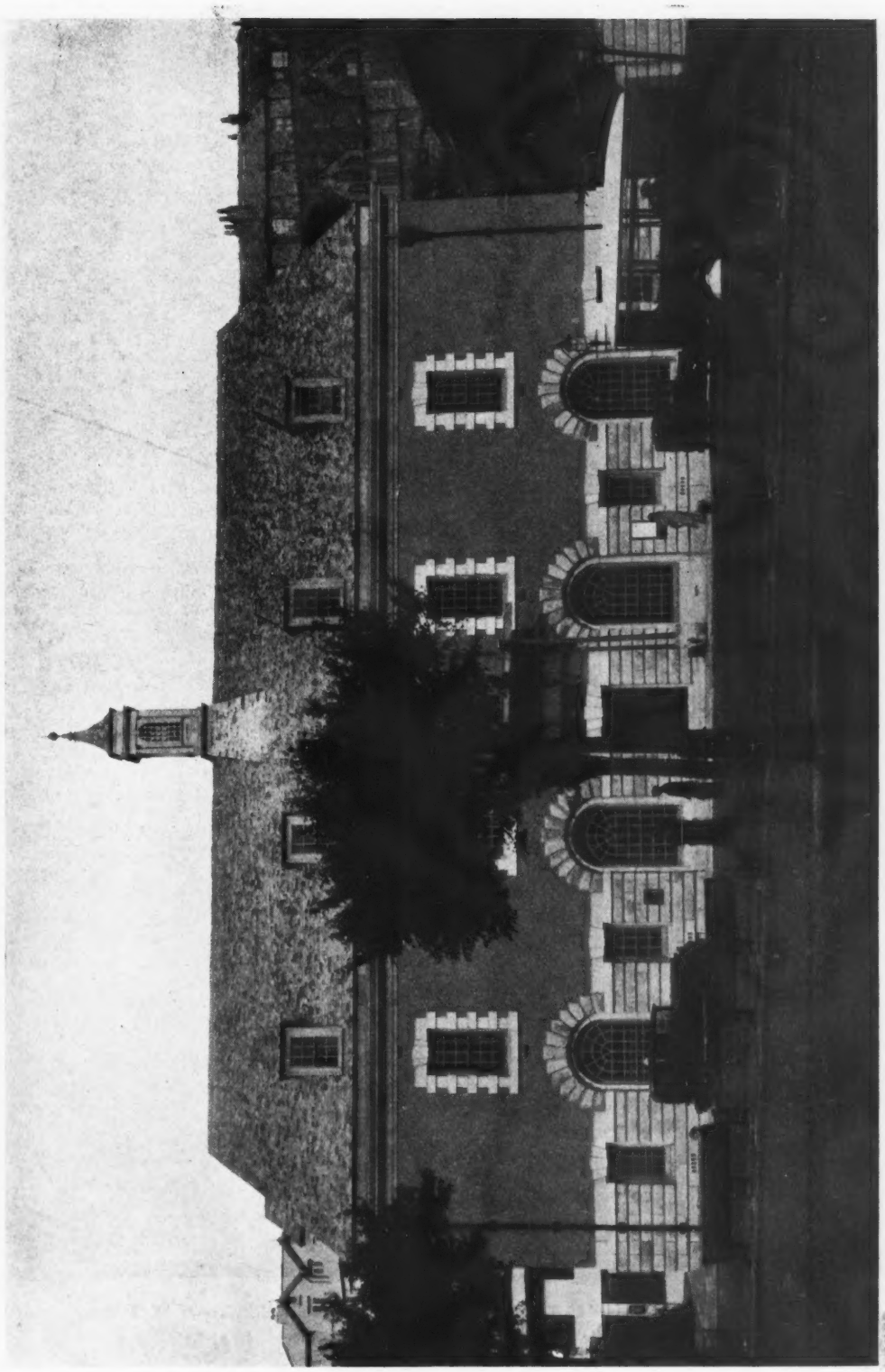

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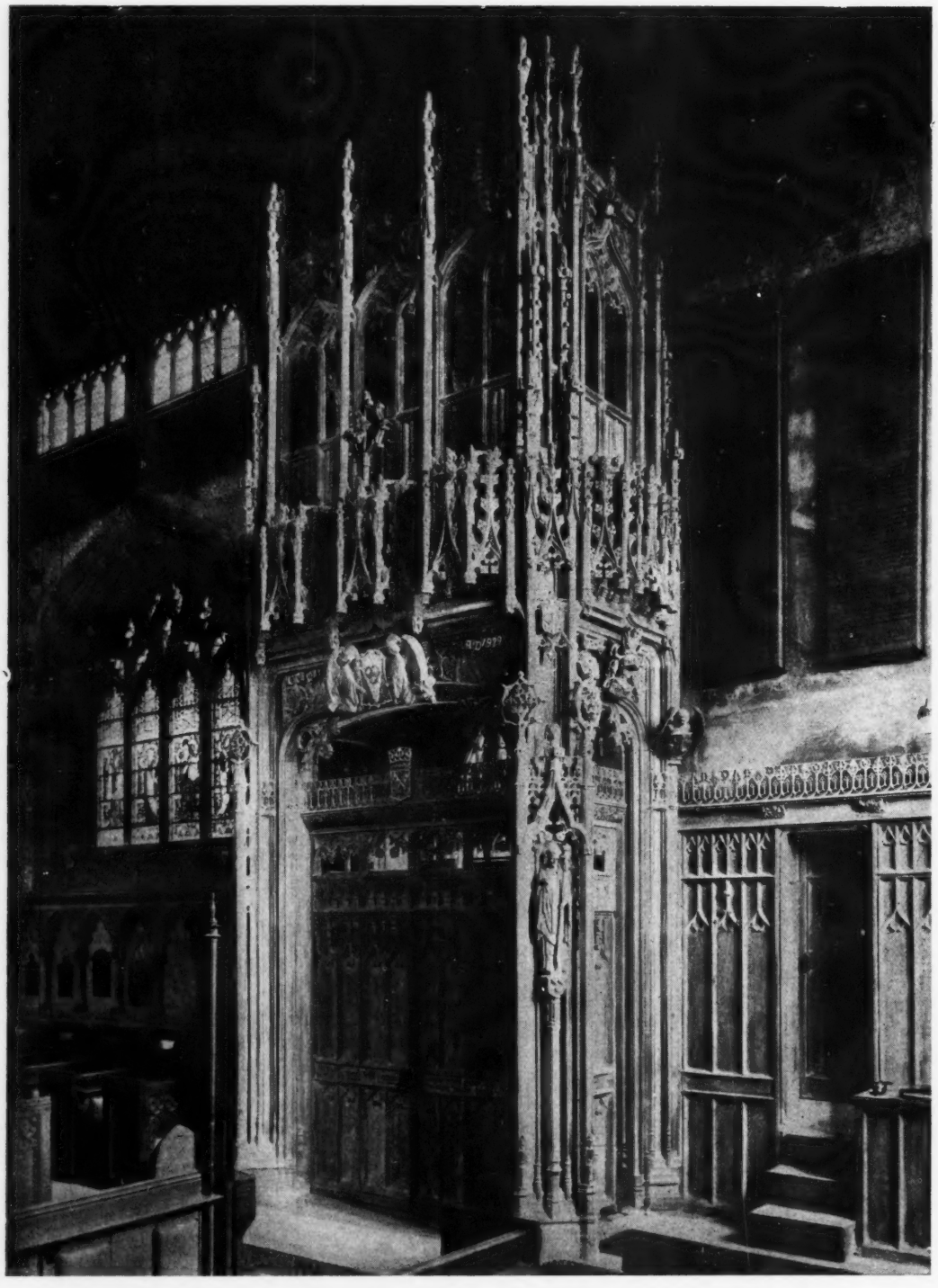
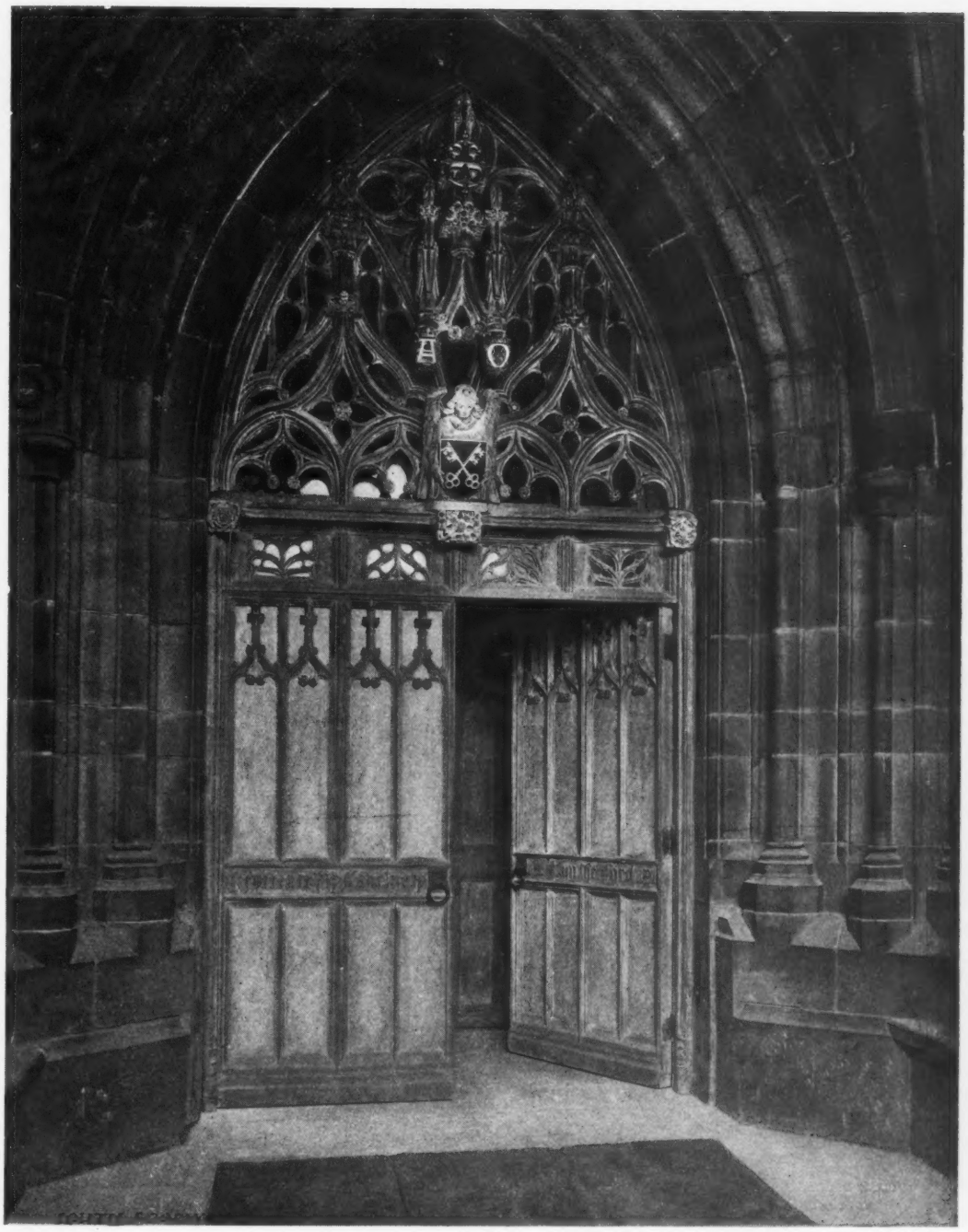


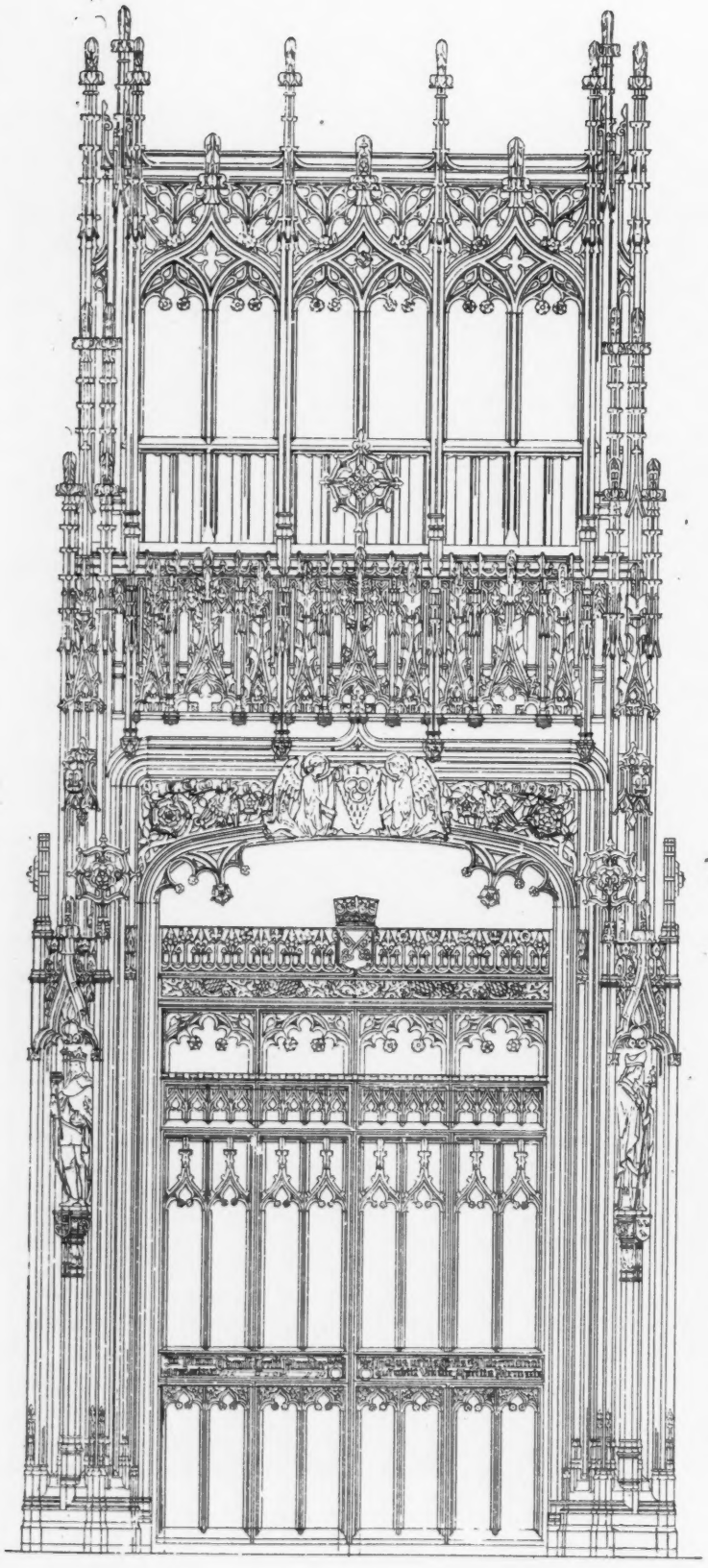
MEMORIAL TO SIR CHARLES TERTIUS MANDER, COLLEGIATE CHURCH OF ST. PETER, WOLVERHAMPTON: Inner South Porch.

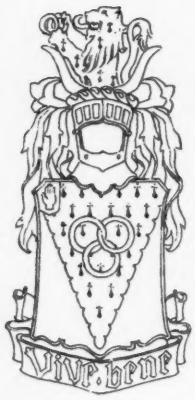
MR. JAMES A. SWAN, F.R.I.B.A., Architect.



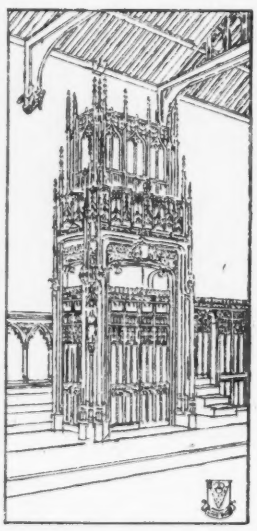
MEMORIAL TO SIR CHARLES TERTIUS MANDER, COLLEGIATE CHURCH OF ST. PETER, WOLVERHAMPTON: Outer Doorway, South Porch.

MR. JAMES A. SWAN, F.R.I.B.A., Architect.



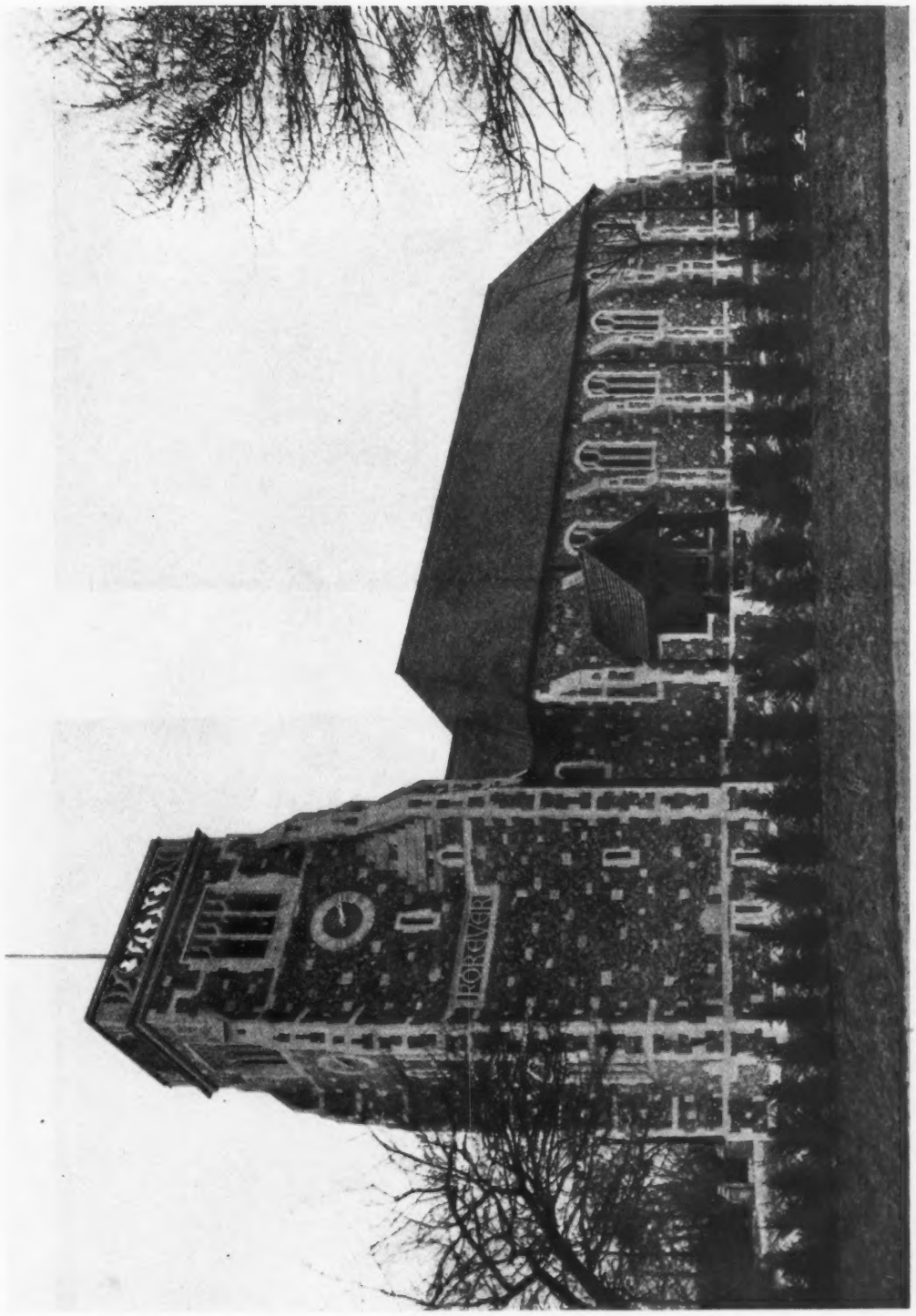


THE MEMORIAL TO SIR CHARLES TERTIUS MANDER BART.



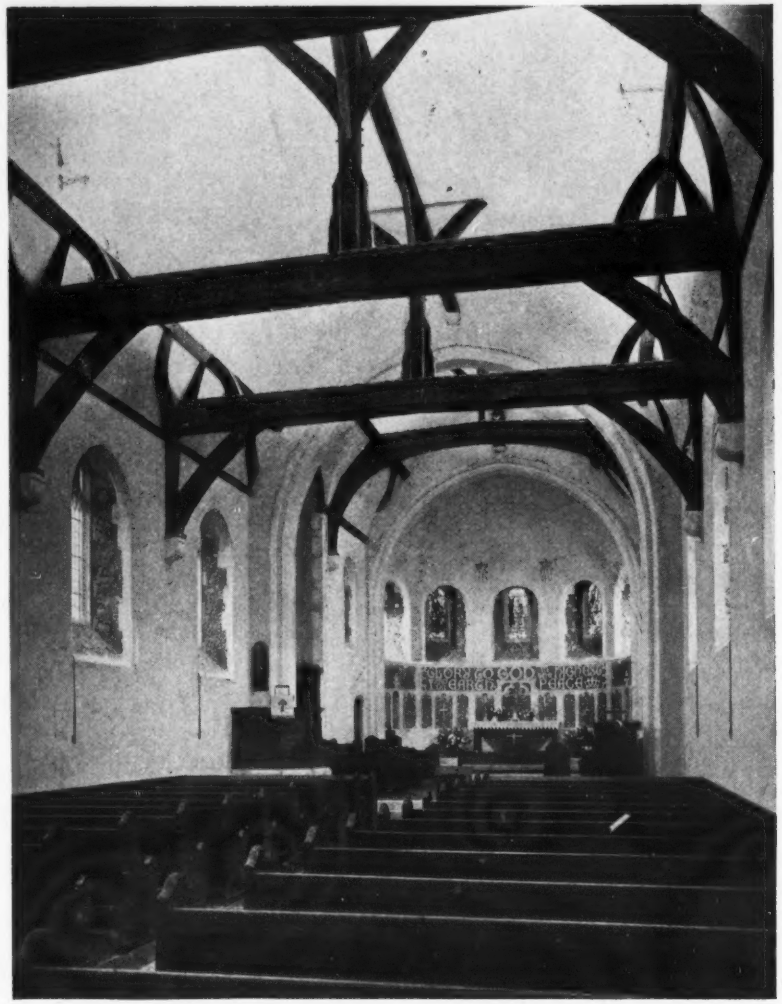
MEMORIAL TO SIR CHARLES TERTIUS MANDER, COLLEGIATE CHURCH OF ST. PETER, WOLVERHAMPTON : Elevation of Inner South Porch.

MR. JAMES A. SWAN, F.R.I.B.A., Architect.

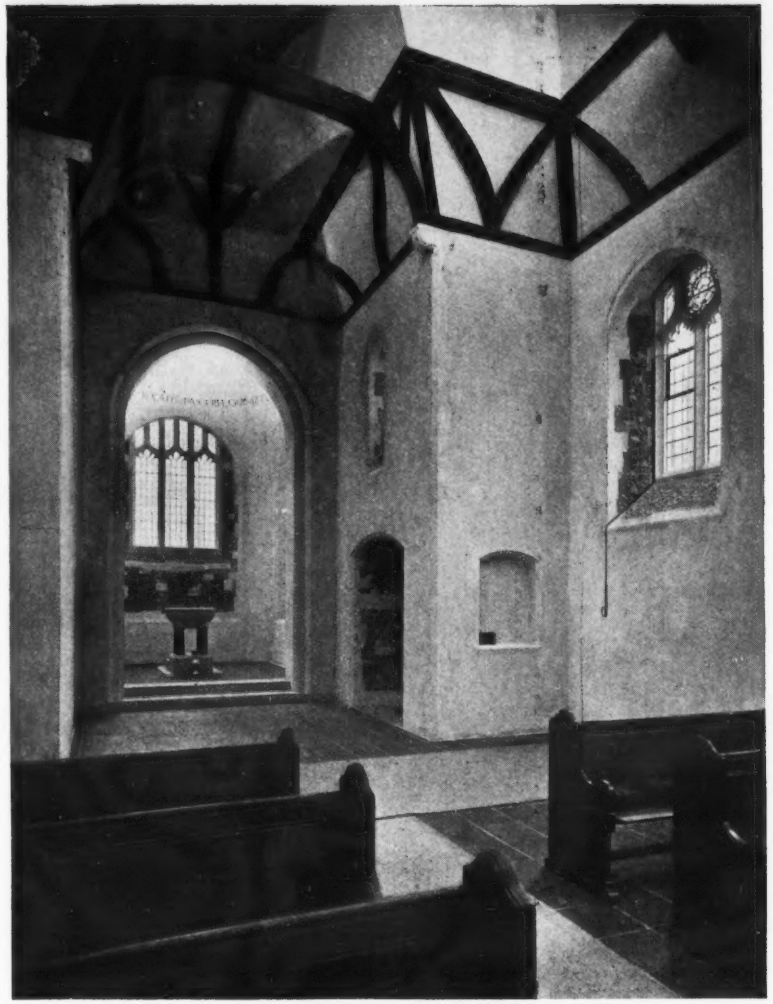


INCHCAPE MEMORIAL CHURCH OF ST. PAUL, WOLDINGHAM, SURREY.

SIR HERBERT BAKER, R.A., F.R.I.B.A., Architect.



VIEW LOOKING EAST.



VIEW LOOKING NORTH-WEST.

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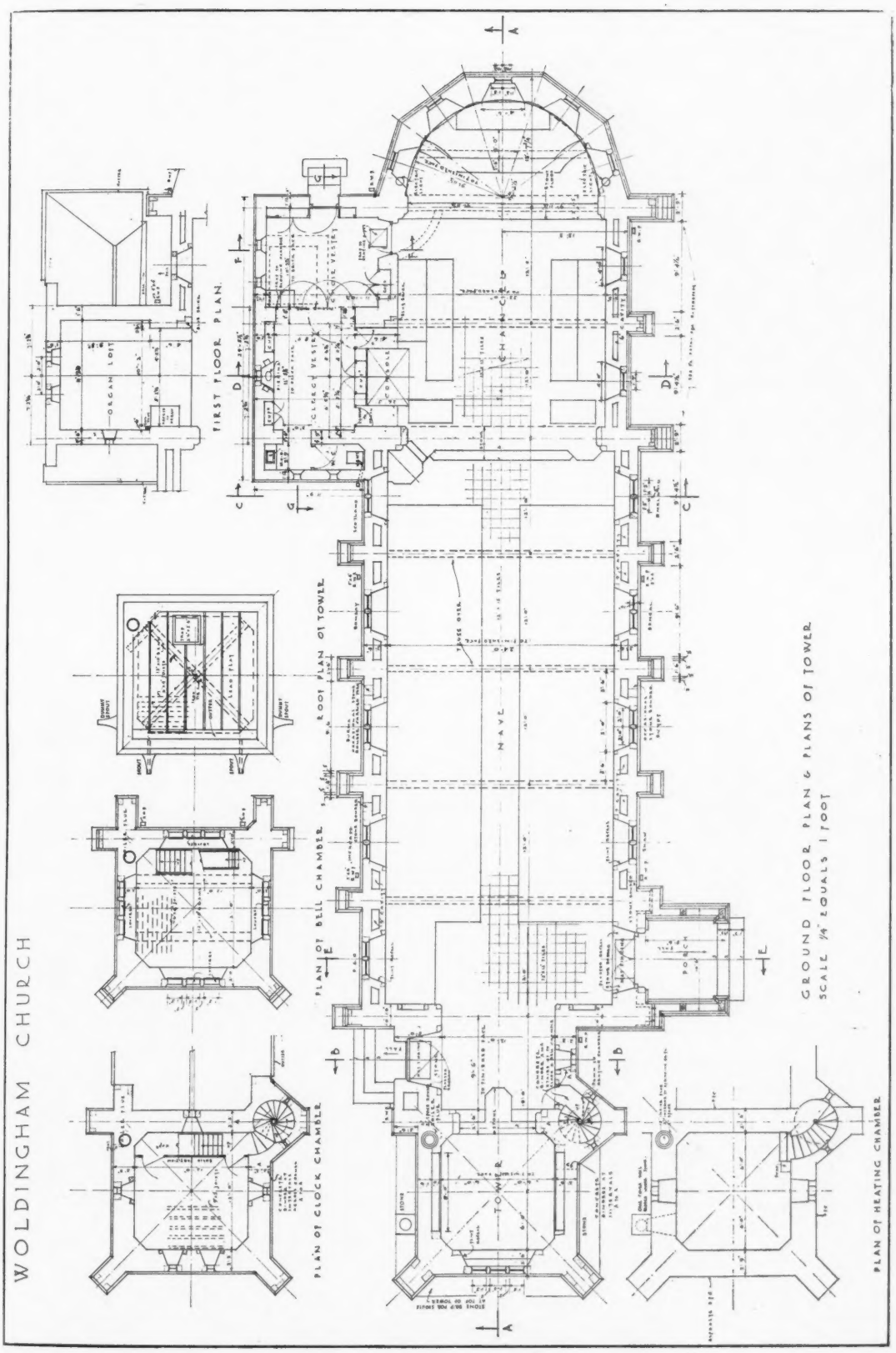
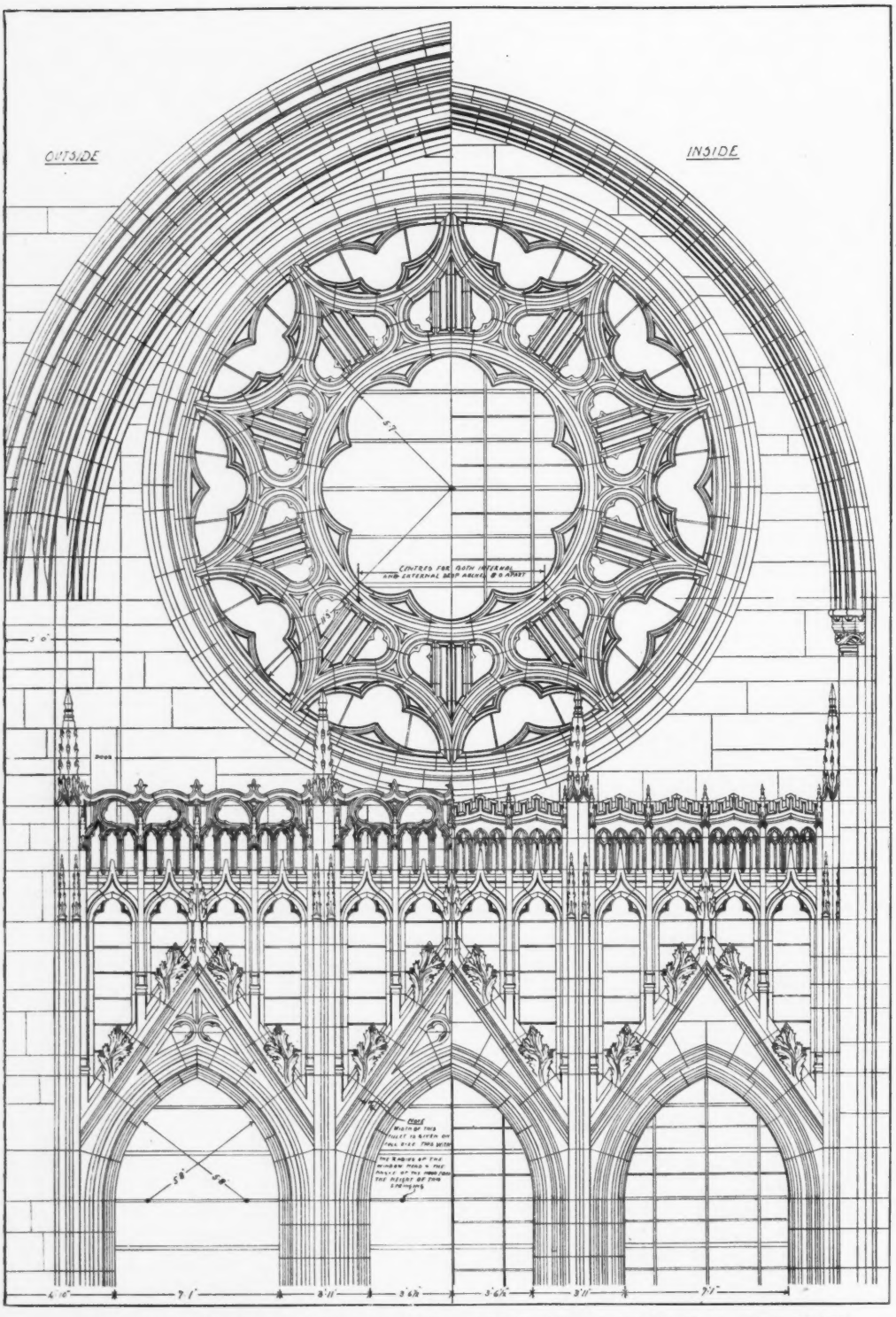


INCHCAPE MEMORIAL CHURCH OF ST. PAUL, WOLDINGHAM, SURREY.

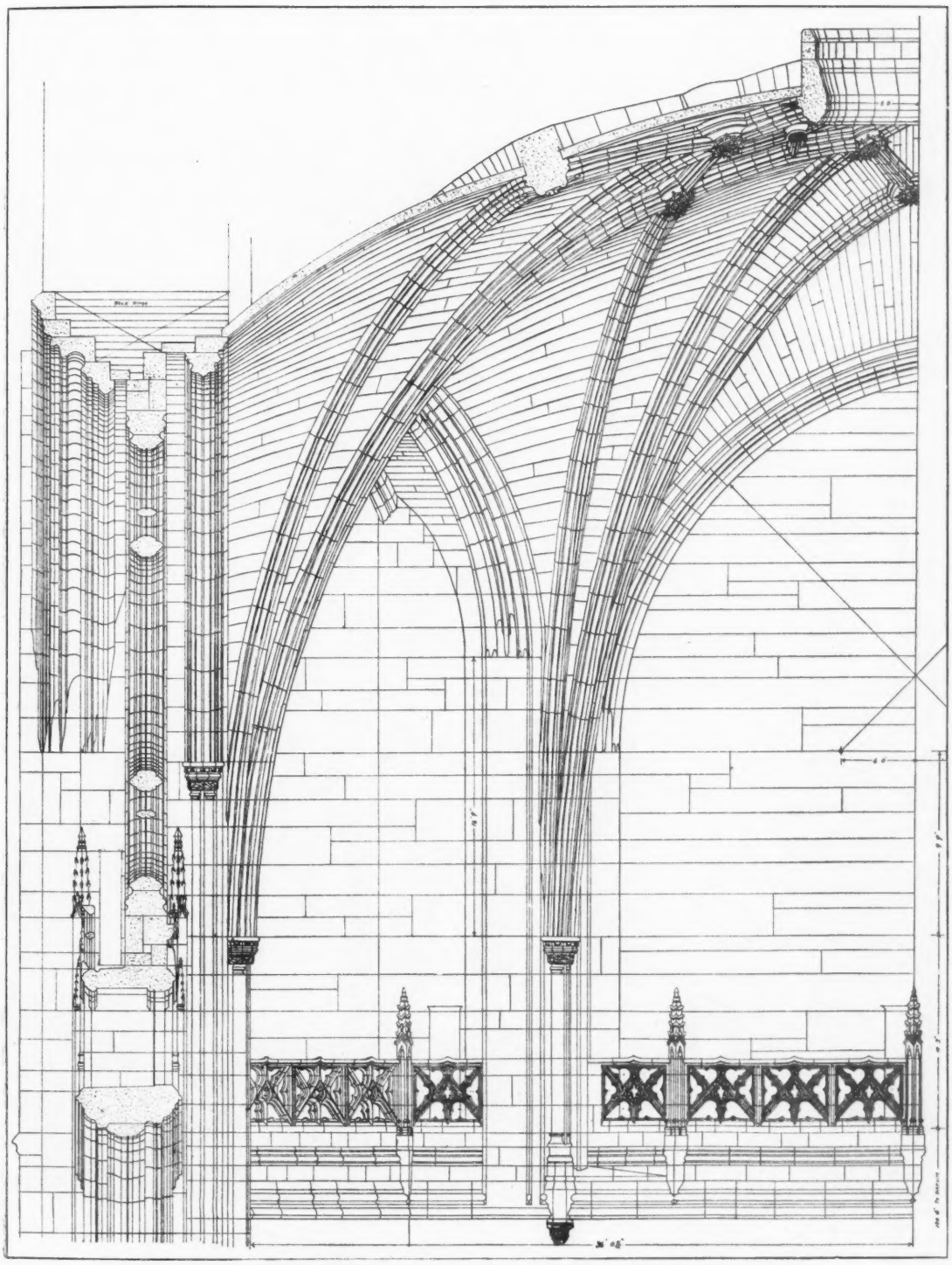
SIR HERBERT BAKER, R.A., F.R.I.B.A., Architect.



ELEVATION OF UPPER PART OF NORTH AND SOUTH WINDOWS LIGHTING CENTRAL SPACE, UNDER TOWER.

LIVERPOOL CATHEDRAL.

SIR GILES GILBERT SCOTT, R.A., P.R.I.B.A., Architect.



SECTION THROUGH VAULTING OF CENTRAL SPACE, UNDER TOWER.

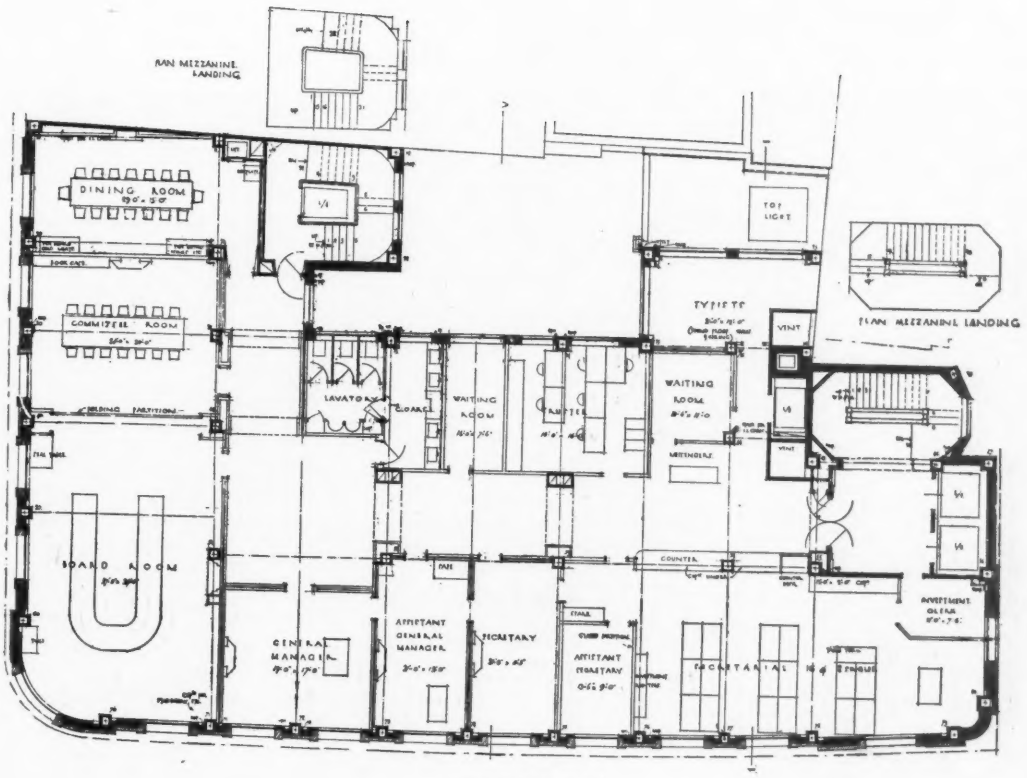
LIVERPOOL CATHEDRAL.

SIR GILES GILBERT SCOTT, R.A., P.R.I.B.A., Architect.

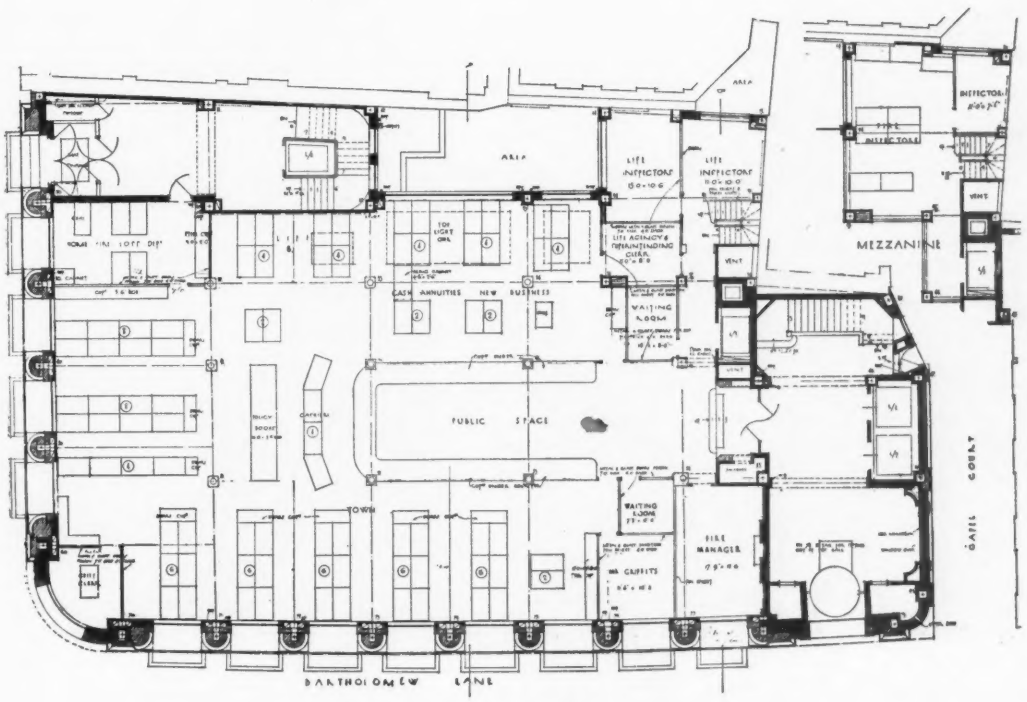
Photo: Bedford Lemere & Co.

HEAD OFFICE OF THE ALLIANCE ASSURANCE CO., LTD., BARTHOLOMEW LANE, E.C.

MESSRS. JOSEPH AND MEWÈS AND DAVIS, Joint Architects.



THIRD-FLOOR PLAN.



GROUND-FLOOR PLAN.

HEAD OFFICE OF THE ALLIANCE ASSURANCE CO., LTD., BARTHOLOMEW LANE, E.C.

MESSRS. JOSEPH AND MEWÈS AND DAVIS, Joint Architects.

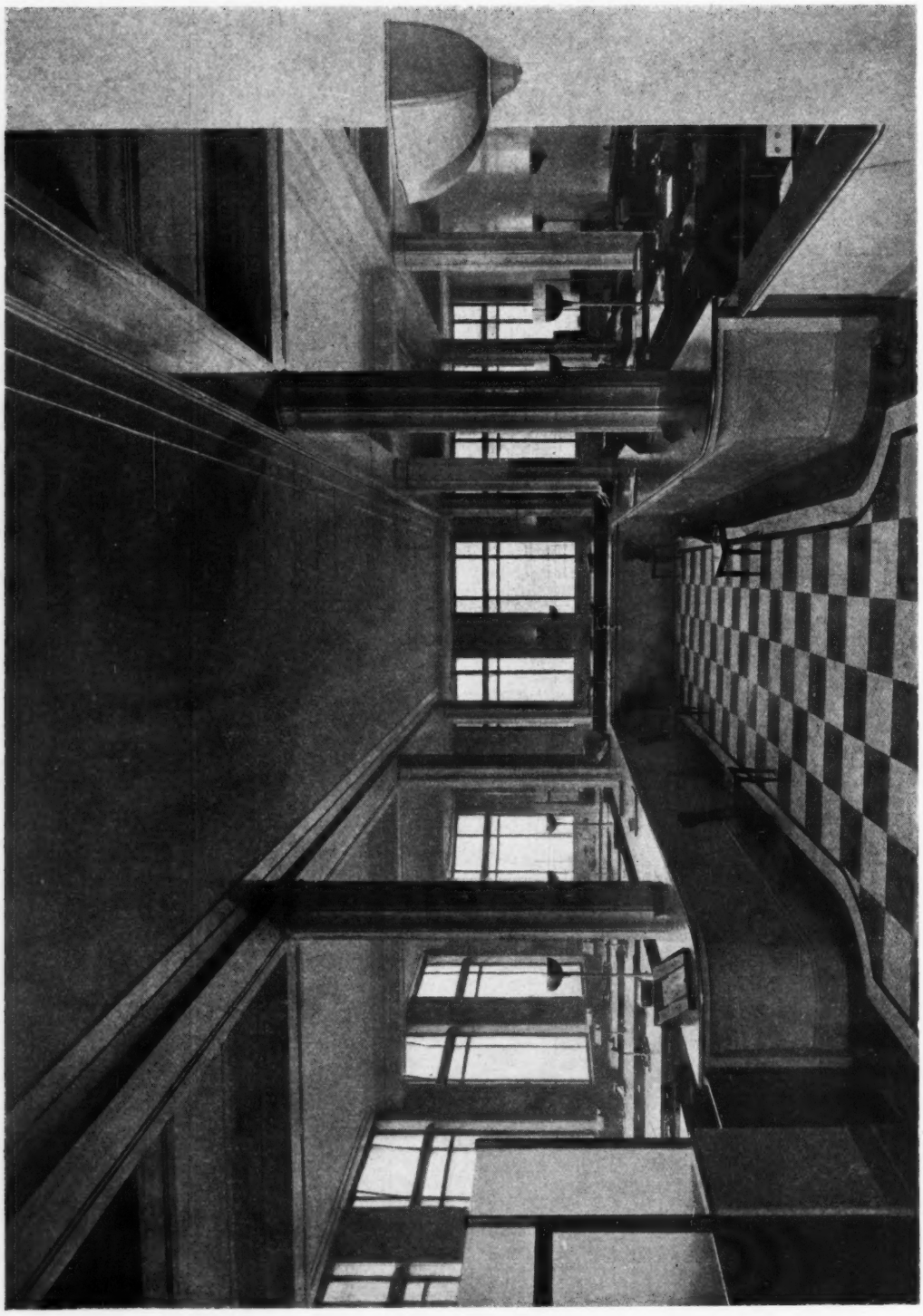
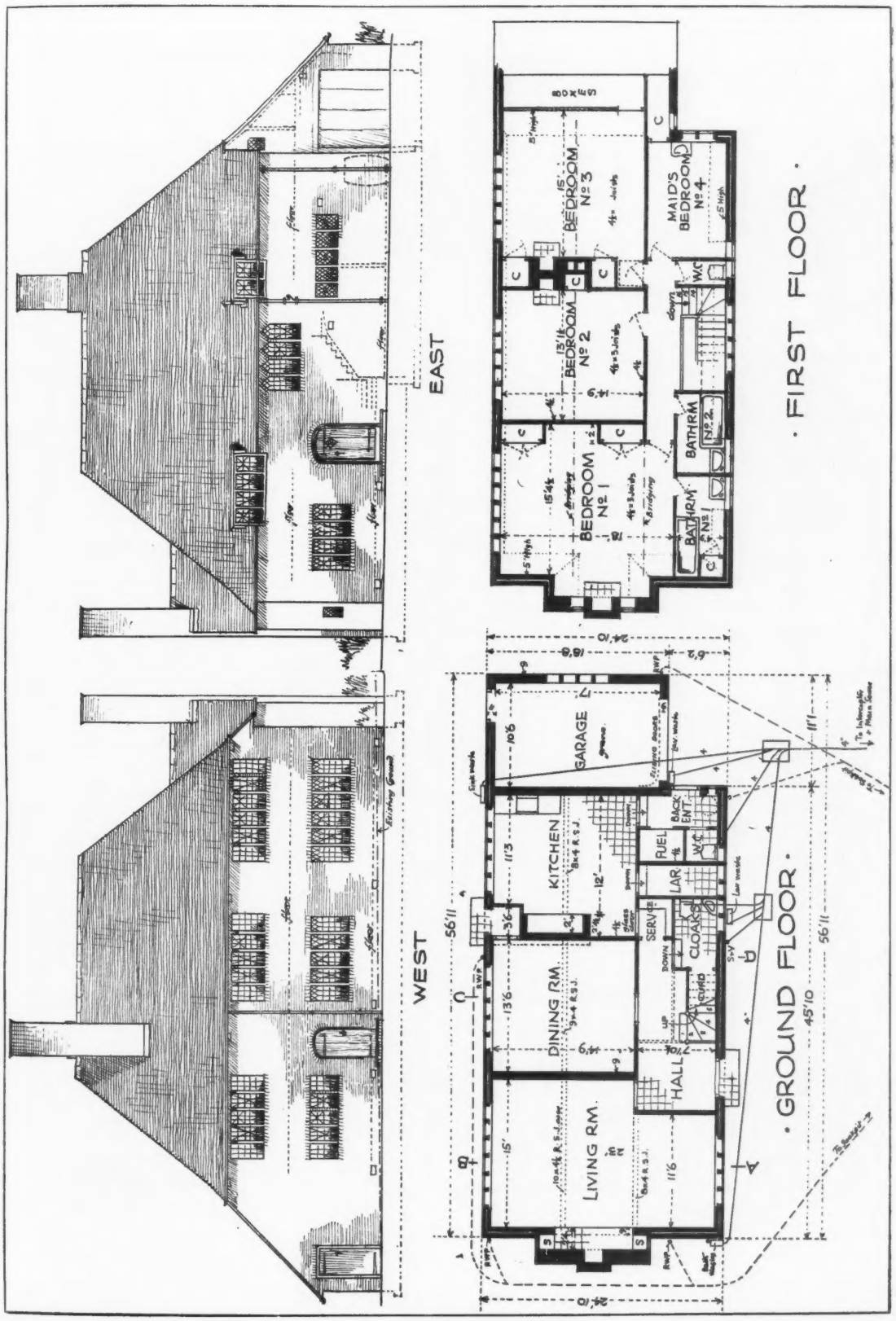


Photo: Bedford Lemere & Co.

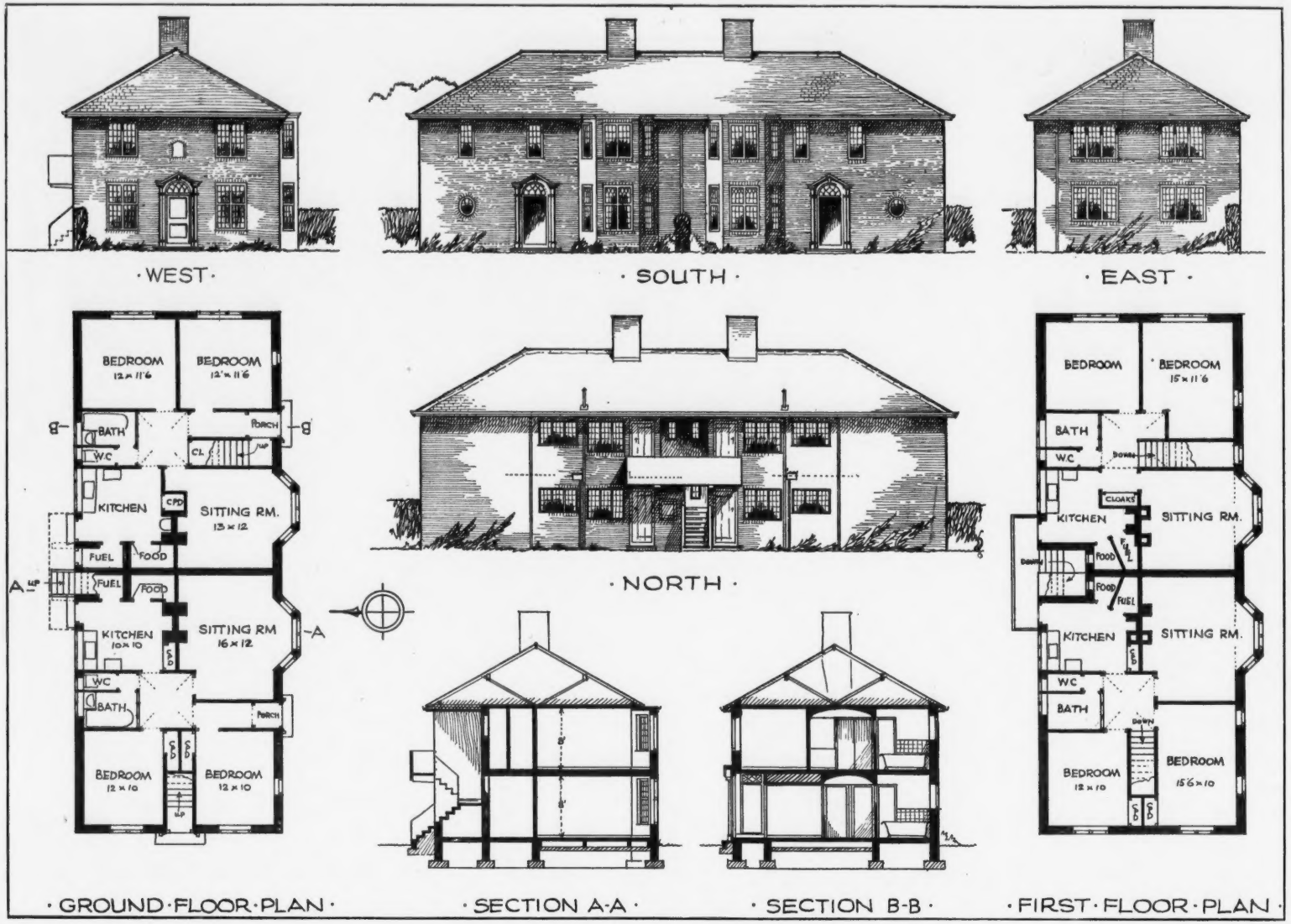
HEAD OFFICE OF THE ALLIANCE ASSURANCE CO., LTD., BARTHOLOMEW LANE, E.C. : Public Space.

MESSRS. JOSEPH AND MEWÉS AND DAVIS, Joint Architects.



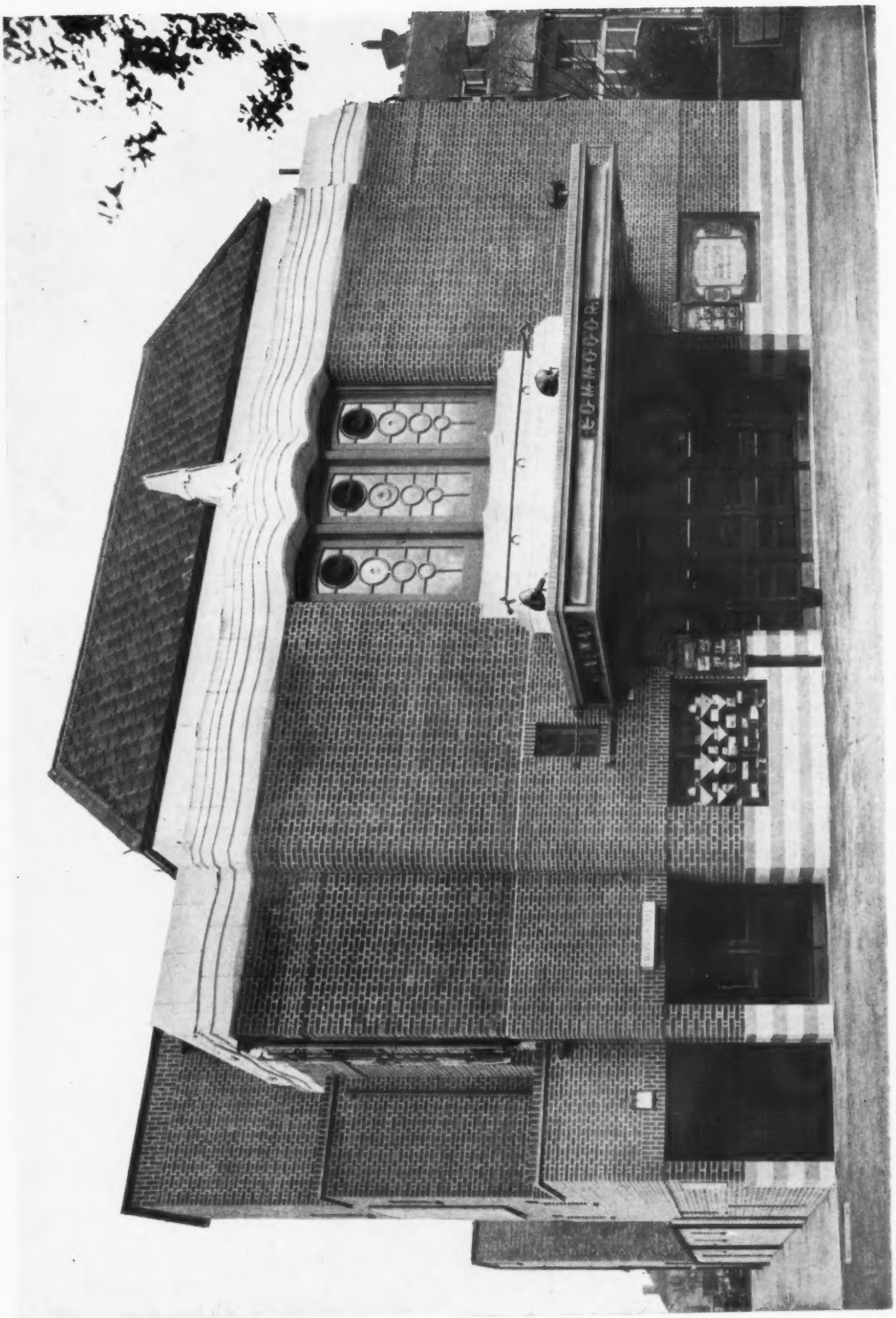
A HOUSE AT RADLETT, HERTS.

MESSRS. BAILLIE SCOTT AND BERESFORD, FF.R.I.B.A., Architects.



A BLOCK OF FOUR FLATS AT SURBITON, SURREY.

MESSRS. BAILLIE SCOTT AND BERESFORD, FF.R.I.B.A., Architects.



THE "COMMODORE" CINEMA, ORPINGTON, KENT.
MESSRS. KEMP AND TASKER Architects.

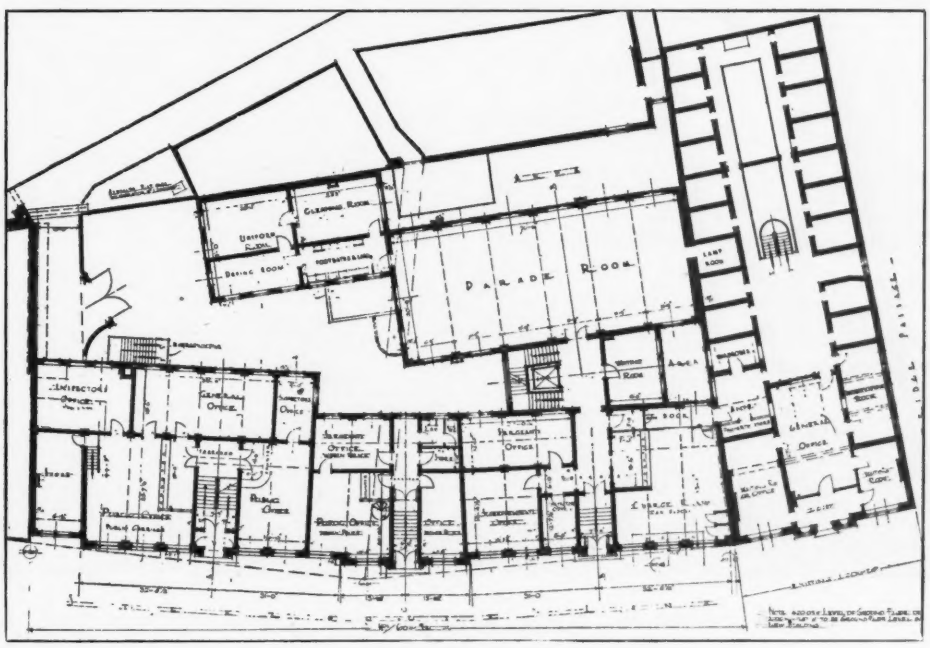
ENTRANCE HALL.

AUDITORIUM, FROM BALCONY.

THE "COMMODORE" CINEMA, ORPINGTON, KENT.

MESSRS. KEMP AND TASKER, Architects.

GENERAL VIEW.



GROUND-FLOOR PLAN.

CENTRAL POLICE STATION AND OFFICES, STEELHOUSE LANE, BIRMINGHAM.

MR. H. H. HUMPHRIES, M.Inst.C.E., City Engineer and Surveyor, Architect.

CENTRAL POLICE STATION AND OFFICES, STEELHOUSE LANE, BIRMINGHAM : Central Feature.

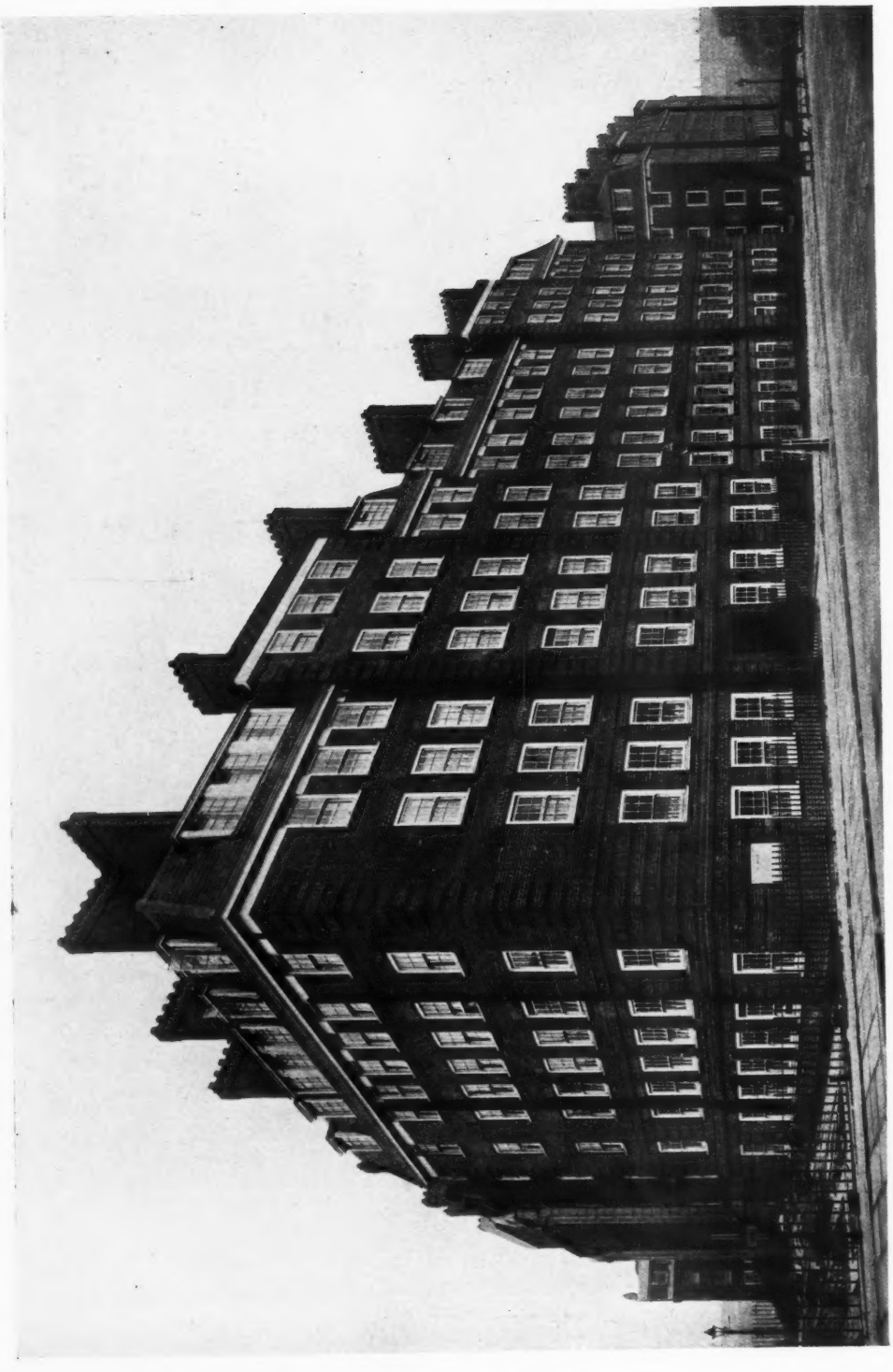
MR. H. H. HUMPHRIES, M.Inst.C.E., City Engineer and Surveyor, Architect.

CHARGE ROOM.

SUPERINTENDENT'S ROOM.

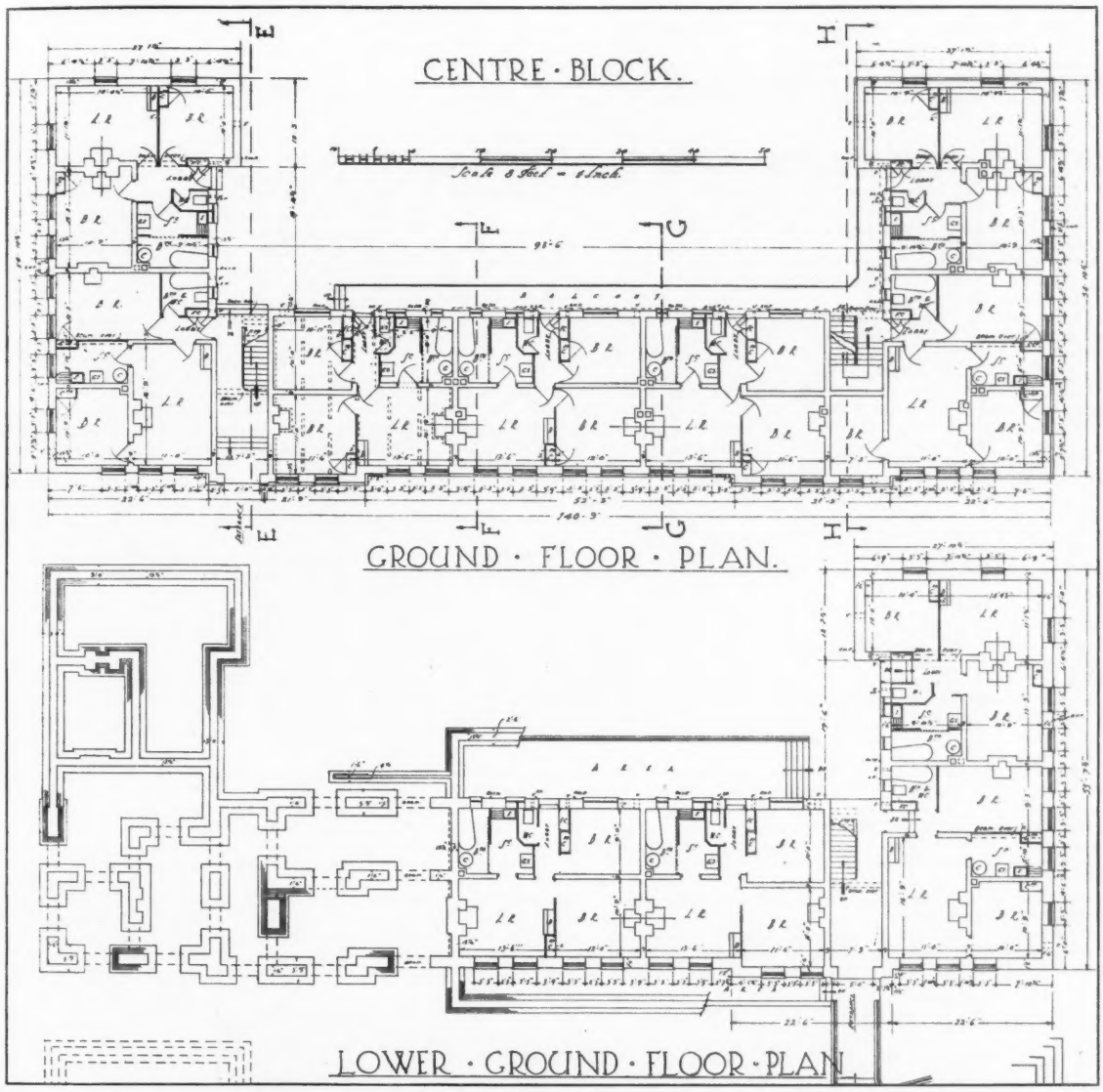
CENTRAL POLICE STATION AND OFFICES, STEELHOUSE LANE, BIRMINGHAM.

MR. H. H. HUMPHRIES, M.Inst.C.E., City Engineer and Surveyor, Architect.



BAKER STREET HOUSING SCHEME, FOR THE METROPOLITAN BOROUGH OF FINSBURY.

MR. E. C. P. MONSON, F.R.I.B.A., F.S.I., Architect.



BAKER STREET HOUSING SCHEME, FOR THE METROPOLITAN BOROUGH OF FINSBURY.

MR. E. C. P. MONSON, F.R.I.B.A., F.S.I., Architect

WHAT is known as the Baker-street Housing Scheme is the Baker-street frontage of a site acquired by the Finsbury Borough Council for housing purposes, at a cost approximating to £20,000 per acre and containing about 3¼ acres. On the first, or Margaret-street, portion of this site the Council erected two years ago by direct labour 144 flats and maisonettes, which contain 456 habitable rooms. The cost of these tenements was over £850 each. On the Baker-street portion the Council have just completed the erection of a further 119 flats, which, opened by Mr. G. H. Shakespeare, M.P., Parliamentary Secretary to the Ministry of Health, on Tuesday, December 19, 1933, contain 385 habitable rooms, and the cost of these, built by contract, was £418 each.

The buildings comprise three blocks of the balcony type, part six stories and part five stories high. There are 28 flats containing living-room and three bedrooms, and 91 containing living-room and two bedrooms, and each flat has a separate scullery, bathroom and w.c.

The rent of a two-bedroom flat is 12s., or, including rates and water rate, 16s. 8d. per week. The rent of a three-bedroom flat is 14s. 6d., or, including rates and water rate, 20s. 9d. per week. The average superficial area of a two-bedroom flat is 546 ft. super. The average superficial area of a three-bedroom flat is 659 ft. super.

Each flat has a gas copper, gas cooker, white glazed Belfast sink, draining board, food and coal cupboard. The living-room and one bedroom in each flat is heated by a coal fire, and in other rooms provision is made for heating by gas fire. The staircase walls are tiled, all other walls being plastered and distempered. The floors are of reinforced concrete on the "Expamet" system, covered with wood flooring, except to sculleries and bathroom, which are laid with granolithic with coved skirtings.

The front and end elevations are faced with red sand-faced bricks, with "Snowcrete" rendered concrete bands and cornices. The back elevations are faced with sand lime bricks pointed in "Snowcrete" cement. The ground at ends and between the various blocks is laid out with sunk stone walled and paved gardens.

The general contractors were Messrs. Gee, Walker and Slater, Ltd. The various materials were supplied by the following firms :—Smeed, Dean and Co., Sittingbourne, Kent, red facing bricks; the Grovebury Brickworks Co., Ltd., sand lime bricks; the Expanded Metal Co., Ltd., steel reinforcement for floors; A. E. Sandilands, electric lighting; Crittalls, Ltd., metal windows; Hill and Smith, Ltd., Brierley Hill, Staffs, wrought-iron railings; Potter Rax Gate Co., Ltd., wrought-iron railings; R. H. and J. Pearson, Ltd., baths, sanitary fittings; Carter and Co., Ltd., wall tiling; Shillitoes Concrete Specialities, Ltd., granolithic work; Alfred Syer, and Clark, Hunt and Co., Ltd., stoves; Gas Light and Coke Co., gas installation; Enfield Stone Co., Brimsdown, Middlesex, artificial stone; Wm. Bignell and Son, garden work.

The buildings were designed and erected under the supervision of Mr. E. C. P. Monson, F.R.I.B.A., F.S.I.

THE OLD AND THE NEW

By REGINALD HALLWARD

A RECENT broadcast by Mr. Howard Marshall on the subject of "Rural Britain To-day and To-morrow" revealed the growing anxiety felt for the traditional countryside, with its age-long associations and charm of character, so rudely threatened by ribbon development, stark new motor roads and ugly building. This inherited charm built up through the centuries, so delightful a trait of national character, is in danger of being destroyed, and instances abound where this disaster has already overtaken it. Curiously enough, as an instance of this, I recently came across one of these extreme contrasts between the new and the old which has been so much occupying the public mind.

I had just passed a learned professor's new house, the very latest thing in "modernist" achievement. It dominated the hill-side. It was in no sense a part of nature, in the way we feel this to be the case in so much of the older building. Nor had any sense of neighbourliness entered into its building. There it stood, a defiance to all the countryside, which it dominated. No criticism in this is intended, but rather an effort to try to understand. Had the house been projected straight from another planet it could hardly have stood there more stark and unrelated to its surroundings. Yet I saw a coach-load of students from a distance arriving to visit it!

The little town near by, with its homely, unassertive, old-world character, knit together by a corporate feeling growing out of age-long traditions, in which was no violence of individual whim, was an overwhelming contrast. It consisted of a long street of houses varying in size and period, but no more than that variety which added to the interest of each, and with that special charm of a low horizon against the sky. And so it was farther in the country, where nature and art, the old buildings and the countryside, all blended together. There was an old farmhouse of the stately and manorial kind, though fallen from its estate, for its own life had passed out of it, its rather austere architecture mutilated by repairs in brick instead of its own stone.

But my purpose is not to linger over this, for there is a gloom in these old places out of which the life has passed. Rather are they a twilight of memories and regret as we read in them of something we have lost, of a composure, a permanence resting on itself and age-long traditions that are no longer ours to-day. The professor's house came back to me with all the gaping void that separates the two, its evident sincerity to what it could understand, as though one should say, poetry and art belonged to an earlier, more primitive state; now we have science and the machine. To make the transition from old to new in presence of the vast changes and catastrophies of the last years could not be easy. Was then the house of the learned professor an instance of the upward trend of life, the security of a new foothold for architecture—another order? I do not wish to be thought unreasonably conservative and to quarrel with the future, nor should we be shocked to find that the old rules and traditions no longer apply. Yet it is doubtful whether this "modernist movement" will last long; perhaps it will last no longer than is necessary to give a shock to our complacency, and retaliate on those lugubrious people with eyes only in the backs of their heads. For we must have the courage of our own acts, and not live at second hand.

Nevertheless, can we be satisfied at one of the leading results of this change, which is no less than the passing of craftsmanship? This is not altogether due to outside causes. The craftsman has in many cases outlived himself and surrendered to the lure of mass production, calling that craftsmanship which is not to be distinguished from the factory. This cannot last long, and already there is the evidence of revolt, both in architecture and craftsmanship. Whether materials are old or new, they will shape themselves according to our thoughts and the ends we seek. Was the professor's house the expression of new belief—of a new epoch? Far from it; it was no more a permanent thing than the pseudo-craftsmanship of the factory. It has been said that in pursuing our error to the end we shall become wise; that we shall then realise how much we have left out of ourselves; that our well-being rests on beauty and nature in its fullest expression, as well as on science and the machine. In the loss of this, may we not gauge our unrest? At a time of so much new knowledge and keen intellectual activity, there are sure to be mistakes, but we shall grow out of them, and craftsmanship will return, because nature and feeling, as well as intellect, have come to inform them again.

We have let the present so hide the past that it is a sealed book to us, and we cannot interpret it because we have rejected too much. Just as the new schools of painting reject chiaroscuro for science, so also does modernist architecture. We are more afraid of the shadows than were the old builders and painters. And a principal reason why we can build so quickly to-day is that we have abandoned craftsmanship for science, abandoned the creative craftsmanship which was nearer to nature when directed by the human impulse behind it. What we do now is therefore more ephemeral. It is argued that permanence is not now desirable; this may be useful to passing commercial interests, but less so to human well-being. Have those who think permanence so unimportant thought out its application to civilisation and the prospect of its permanence?

The fundamental difference between the old and the new we find, therefore, to be in the abandonment of imagination for science; architecture up to a period did combine the two. The old craftsmen expressed what they felt as well as what they knew, adding intelligence to intellect; and it is intelligence we lack. When we are again moved, when feeling and emotion direct intellect, it will express what we feel as well as what we know, as the old farmhouse expressed it in this more comprehensive way. For craftsmanship is not sustained by science but by imagination.

There are some who will tell us that poetry is to-day an outworn form of expression, that the picture is a survival, and that architecture in an age of constant change and ephemeral objects will hardly find scope for its more eternal values. But we should understand what this means for the future of civilisation. Are these various forms through which the best thoughts and beliefs hitherto embodied themselves, now to be looked for elsewhere? Does their absence, if according to such views they are to become absent, suggest only that they are finding new embodiment in "modernist" building, in the temporary, the scientific, and the mechanical? Or does it suggest that the security for the future, threatened by materialism, will yet find redemption through poetry and art?

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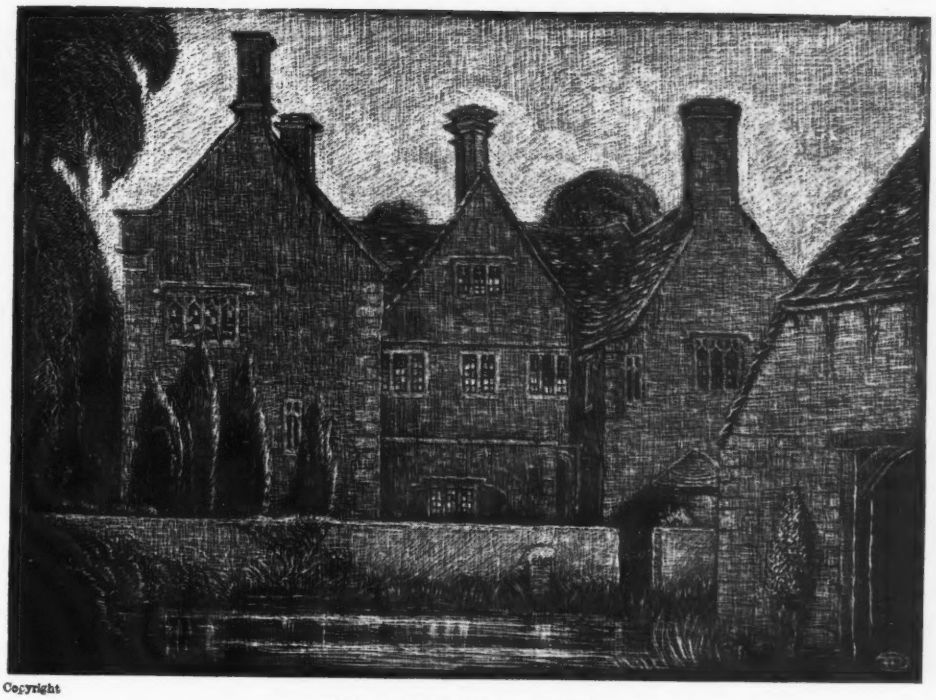
"THE ROAD TO THE FARM." FROM A DRAWING BY MR. REGINALD HALLWARD



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AN OLD COTSWOLD FARM.

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OLD FARM BUILDINGS IN GLOUCESTERSHIRE.

FROM DRAWINGS BY MR. REGINALD HALLWARD

THE TEMPLE OF PEACE, ROME

By SELWYN BRINTON

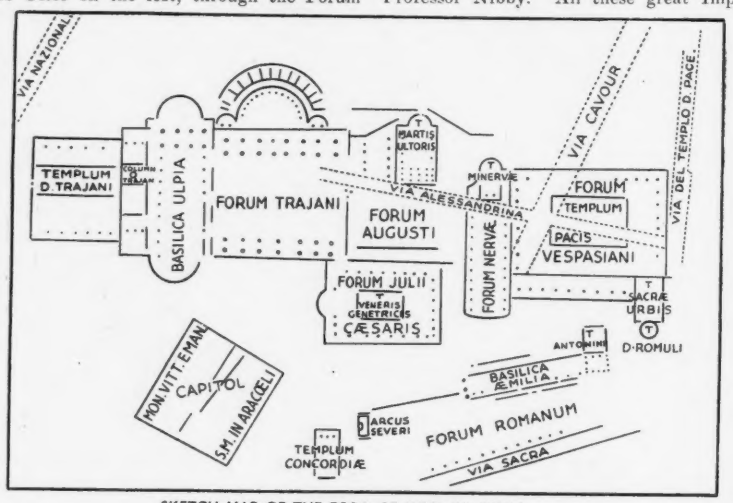
On October 28, 1932, a day which heralded the beginning of the eleventh year of Fascist rule in Italy, there was held a military parade which may be called unique in its architectural surroundings. Surrounded by a brilliant staff, Signor Mussolini rode down the newly named "Road of the Empire," which leads from the great basilicas and fora of ancient Rome, past the yet surviving portico of the Temple of Antoninus and Faustina, the grand and massive remains of the Basilica of Maxentius, the Temple of the Sacred City, down to the Colosseum itself. All the armed forces of modern Italy were represented in this great review. But it was far more than a great military display, dating ten years of Fascist government. It was also a record of a unique achievement in bringing back the glories of old Rome to our actual knowledge.

It is impossible to pass by the name and the claims of Senator Corrado Ricci. He has been the driving force and the guiding spirit through this whole work of excavation; he first grasped the possibilities of recovering the grand Market of Trajan, and carried through that work, with its immense difficulties, to the present successful conclusion. Next came the Forum of Augustus, which I was able to see some two years ago, through his assistance, when the work of recovery was still going forward; and I can never forget the impression of that immense wall of Roman brick which soars up behind the Forum and Temple of Mars to guard these sacred precincts from the crowded Suburra. Near this, as will be seen in the sketch map, was the Forum of Nerva, called *Transitoriumm*; and now there remained for excavation the first in time of these Roman fora, that of Julius Cæsar. This was accomplished and completed in the early months of 1932; and the wonderful decorative work of its Temple of Venus Genetrix revealed to the world.

Perhaps the work which impressed me most of all was the recovery of the great Market of Trajan, for I had seen from the hillside, covered with every kind of mediæval and modern building, gradually, year by year, the great Roman market, planned by Apollodorus for the Emperor Trajan, emerge—rising tier by tier of terraced colonnades, till its height equalled at last that of the column in the centre of his forum, once crowned by the Forum of the great Cæsar himself

Nor yet shall I take in detail the no less important recovery on the other side of the Capitol—and now approached by the new "Road of the Sea," which runs round the foot of the Tarpeian rock leading seawards—of the Theatre of Marcellus, whose noble proportions, with the later accretion of mean buildings removed, now stand out in their full beauty of design. But I wish to devote my remaining space to the problems of the future in the recovery of old Rome; and particularly to mention some interesting facts which my own research, aided by happy discovery, has placed within my knowledge. I may first direct attention to the sketch map of the Roman Fora. Leaving the grand Forum and Market of Trajan, and following the Via Alessandrina, with the Temple of Mars Ultor on the left, through the Forum of Augustus and that of Nerva, we reach the site once occupied by that great Forum of Vespasian, with, beyond, the Via del Tempio di Pace.

Of course, the existence of this Forum was known from the records which have survived; but its existence had become almost forgotten, even by such a careful writer as Professor Nibby. All these great Imperial



SKETCH MAP OF THE FORA OF IMPERIAL ROME.

MARKET OF TRAJAN.

fora contained in their centre the temple, defining its religious connection, enshrining, as it were, its soul. In the earlier Forum of Julius is the Temple of Venus Genitrix; in that of Augustus that of Mars, avenger of the blood spilt by Brutus; in that of Nerva of Minerva, goddess of wisdom and the arts; and in this great Forum of Vespasian was the Temple of Peace, the gift of Rome to the world.

This temple has entirely disappeared, but must have been a thing of glorious beauty, and have been, in some part, still existing in the fifteenth century. It was the practice of the Italian masters of that great period in art to go to Rome in order to make careful studies of her remaining monuments. Brunelleschi is a distinguished example, San Gallo, La Cronaca, even Bramante himself; but none made more careful and precious plans and drawings than the great Sienese architect, sculptor and painter, the creator of modern fortification as well as of Renaissance architecture in new forms, Francesco di Giorgio Martini. In studying his drawings, both the originals and in Signor Bartoli's reproductions, I have found ground plans of the great Temple of Peace, which had been built by Titus and Vespasian after the Jewish war ended had given peace to the Roman world.

Only last year a remarkable MS., buried since 1517 in a Franciscan convent, came to my notice. In that year the learned writer, a friar of that Order, whose name is known to history, in describing the Forum of Rome, mentions also this Temple of Peace,

By courtesy of Senator Corrado Ricci.

THE LATEST EXCAVATIONS OF THE FORUM OF TRAJAN.

COLUMNS OF THE BASILICA ULPEA, NOW RAISED IN THEIR PLACES.

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then in state of ruin, "*ruinas Templi Pacis*"; and more than this, saw within the Basilica of St. Peter, then being rebuilt by Bramante, "the twelve great marble columns, most beautiful, which Constantine had lifted from the Temple of Peace" to set around the high altar of the basilica, but, to the writer's sorrow, then "cast down and thrown aside."

But if such was the fate of the mighty columns of the Temple (one only may have survived to be set up without St. Maggiore, and crowned with a figure of the Virgin), who knows what treasures may be still beneath the ground. For in this temple the Emperor had placed the art treasures, the spoil of Greece, but hateful from their association to the Romans then of the marvellous "Golden House" of Nero; here, too, as the Franciscan writer records, quoting Josephus and early authorities, after the long triumph had wound its way to the Capitol, while on his Arch were carved the Jewish captives, Titus had placed the treasures of the Temple of Jerusalem, the Golden Candlestick, the Table of Shewbread — "all the treasures from the Temple of Jerusalem Titus and Vespasian placed in this Temple (of Peace)." Is it too much to hope that, even within our own time, when the great work of excavation continues, some part at least of these treasures may be revealed to our eyes?

TOWN PLANNING SCHEME FOR LONDON

By GEORGE BRANSBY WILLIAMS, M.Inst.C.E.

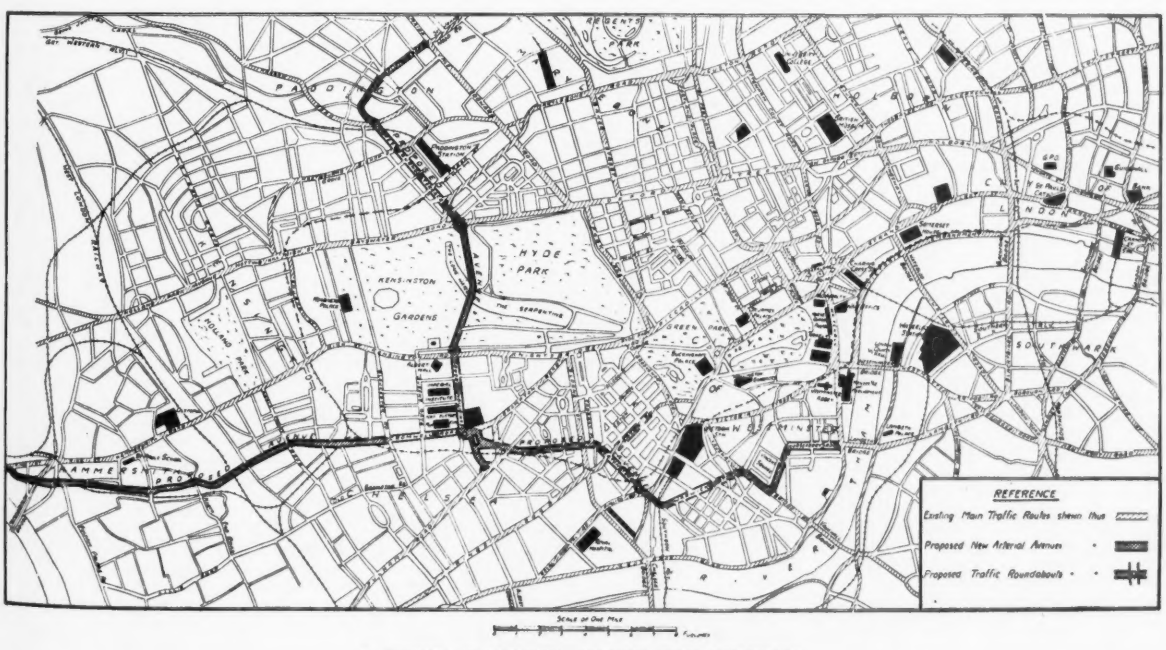
THE congestion of traffic in the more important London streets threatens to become altogether unmanageable in the near future, unless the capacity of the existing main routes can be increased, or new thoroughfares opened up. It may be taken for granted that the various authorities concerned are fully alive to the dimensions and difficulties of the problems involved. The whole question of the development of Greater London was most carefully considered by the Regional Planning Committee during the six years of their existence and many new roads, as well as the widening of existing ones, were recommended for suburban areas in their final report. Other schemes for replanning parts of London have been put forward, and in some cases widely discussed, but I cannot discover that any project for new arterial highways through the centre of the Metropolis has been seriously considered. It may appear at first sight that any such proposals would of necessity involve such enormous expense as to make them impracticable. I believe, however, that such a view is not correct, and that the scheme described in this article is not only feasible, but could be carried out at a cost which, in the circumstances, need not be considered excessive.

Briefly, the project consists of three new arterial avenues, running north, west, and east from a traffic centre in South Kensington opposite the Victoria and Albert Museum, with a short link connecting southwards to the Fulham-road. The north avenue would terminate at the junction of Maida Vale and St. John's Wood-road, connecting *en route* with the Harrow-road, and with the extension of the existing western avenue from Wood-lane, when that is carried out; the Hammersmith avenue would end with a junction with King-street, Hammersmith, whilst the Westminster avenue would traverse the heart of the City of Westminster up to the west end of Lambeth Bridge. Exhibition-road would form the first length of the north avenue, and Cromwell-road of the Hammersmith avenue. Both these roads have carriageways averaging about 55 feet wide, and they could take a much larger volume of traffic than they now do, although the width of carriageway is somewhat less than would be provided in the case of new or widened thoroughfares.

The North Avenue would be continued from Alexandra Gate across the park. The existing road would be utilised as far as the Serpentine, across which a new bridge would be constructed. From its northern end a road the same width as the Mall would be made across the open parkland between the Long Water and Buck Hill Walk. The present road would then be no longer required and could be transformed into a riding track. At the entrance to the park at Alexandra Gate and the exit at Westbourne Gate polygons would be formed by setting back the park gates, and central islands would be placed for traffic roundabouts. The architectural features of the park gates and their surroundings would require special consideration. Westbourne-street would require to be widened, but Westbourne-terrace could be made wide enough by setting back the walls from their present position to behind the private gardens on each side and transforming the latter into pavements. The Great Western Railway bridge need not be widened if the footways can be put on cantilevers outside the main trusses, leaving the space between these entirely for the carriageway. A new bridge would be built over the canal between Chichester-road and Clifton Villas. In order to gain sufficient headroom over the canal it would be necessary to raise the roadway on the south-west side and approach the bridge by an incline. The rest of the avenue would be formed by Clifton Villas and Clifton Gardens, the widening of which would present no particular difficulty.

The Hammersmith-avenue would extend from the end of Cromwell-road along West Cromwell-road. The present width of the carriageway here is inadequate, but it could be increased sufficiently by setting back the iron railings in front of the houses and acquiring the narrow strips of gardens, which do not appear to be any particular advantage to the householders. The approach to the bridge over the West London Railway would be across land now covered by three rows of small cottages. These would be acquired and the surplus land utilised for the erection of better-class dwellings The west approach to the railway bridge would entail expensive acquisition, for there seems no alternative to demolishing part of the repositories of Messrs. Whiteley and the laundries behind. Farther west the best alignment seems to be through Edith Villas and along Gwendwr-road, the latter being widened on one side. On this length there would be a junction with the South Circular-road shown on the Regional Planning Committee's plan. It would simplify matters if a strip of land along the south side of St. Paul's School playing field could be acquired. This could be done without materially reducing the area used for the games, for the land behind the pavilion is not part of the playing-field area. One row of trees could be left standing. Between Colet-road and Hammersmith Station the avenue would traverse several streets of low-class houses, which could be acquired and the surplus land used for a housing scheme. At the junction with Fulham Palace-road there would be a triangular-shaped traffic roundabout with a central island. From this point the avenue would cross Bridge-street and Bridge-avenue, and finally join King-street near the point where Down-street now takes off.

Thurloe-square lies immediately to the east of the proposed new Central-square. Here



A TOWN PLANNING SCHEME FOR LONDON.

the traffic along the Westminster-avenue could be divided. That going eastward would proceed along the north and east sides of the square, and the westward-bound traffic along the south and west. From Thurloe-square the alignment of the avenue would be across Alfred-place to a traffic roundabout at the junction of Fulham-road, and thence to the west end of Milner-street through the rows of small houses that front on Caroline-place, Ives-street and Green-street. These would presumably be replaced by blocks of residences similar to the adjoining Marlborough-buildings. The alignment of the new highway from this point for some distance eastwards presents some difficulty, for it would have to pass through one of the best residential areas in London, and whatever line were selected would entail acquiring and demolishing some large houses. The best route seems to be a straight line from Milner-street to the south end of Cadogan-square, thence across Sloane-street to the south end of Cadogan-place, and through the south-east corner of the latter to the top of Eaton-terrace. The latter would be widened to form the next portion of the avenue, which would bend to the west before reaching Pimlico-road. The surroundings of Little Ebury-street are definitely slumlike, and their clearance would be a sanitary improvement. From the end of Buckingham Palace-road the route would be over Ebury Bridge and along Warwick-street. The bridge has a carriageway of 45 ft., and its widening might not be necessary in the first instance, but Warwick-street would be widened throughout. From the junction of the latter with Vauxhall Bridge-road, the most direct alignment would be through Vincent-square, but the objections to this are so strong that it would be necessary to make a detour—utilising Vauxhall Bridge-road as far as Chapter-street. From the traffic roundabout at the junction with the latter the avenue would turn north-east through Hide-place to Regent place. Horseferry-road, which forms the last link in the scheme, requires special consideration. Presumably there is already a scheme at alignment of frontages in existence for this street, which has improved in character of late, and, with the removal of the Westminster Hospital in prospect, seems likely to improve much more in future. With care and reasonable control over its architectural features it seems that Horseferry-road might eventually become a shorter edition of Victoria-street, but if one may judge from the distance allowed between Thames House and Imperial Chemical House, it is doubtful whether the possibility has been envisaged hitherto of this road forming part of a main through traffic route from east to west.

The fourth main exit road from the Central-square would be a short one leading through Pelham-place and Pelham-crescent to Fulham-road. The distance between the houses in Pelham-place is sufficient to make any demolition here unnecessary. The gardens in front of the houses, if acquired and thrown into the roadway, would make the latter wide enough. The Central-square itself would present no difficulty. All that would be needed would be to acquire the block of houses at Cromwell-gardens and some houses on the south side of Thurloe-place. In the centre of the Square an island would be placed, round which the traffic would circulate.

The details of the proposed scheme will be sufficiently clear from the foregoing description. Its main lines are shown on the accompanying map, from which the effect of the proposed arterial roads upon the through traffic may be judged. A new direct route would be provided from Hammersmith to the City across Lambeth Bridge, and either Blackfriars, Southwark or London Bridge, and also along the Old Kent-road to Deptford, Woolwich, Greenwich and the south-east, whilst a convenient highway would be available from Hampstead, Hendon, Finchley and the north, to the south-west. It is manifest that these new avenues would afford great relief to the overcrowding in the existing main streets, and there does not appear to be any other method by which equal results could be obtained for the same expenditure of money.

An approximate estimate of the cost of the engineering works comes, in round figures, to £2,000,000. The cost of acquisition of land and buildings would be much more. A reliable estimate of this could only be made by an expert land valuer after a complete survey. As a rough guess I should put it at between £4,000,000 and £5,000,000. A substantial portion of the cost of the scheme would be recouped eventually by the sale of surplus lands and by betterment charges on properties improved by the works. The alignments of the avenues pass in many places through comparatively low-class property, where the land left fronting the new street would be much enhanced in value by the scheme. The total length of the proposed Avenues would be over 7½ miles, and, when the magnitude of the work and the benefit that would be derived from it are considered, it can hardly be deemed an expensive one.

In conclusion, I may add that, if a scheme on the lines I have suggested is urgently required, the sooner it is taken in hand the better. It is obvious that some parts of London are changing their character rapidly, and it might well be found in a few years' time that a scheme of town planning, now quite feasible, had in the meanwhile been made impracticable by the erection of huge blocks of buildings in a position that would block the improvement subsequently desired.

"THE BUILDER" DEBATE

LXIX.—AN AGE LIMIT FOR ARCHITECTS.

"That an architect is too old at fifty-five."

SIR,—In putting forward the above motion, I feel that I am in excellent company in my opinions, because, if we are to believe the evidence of the recent Whitehall decision, this view is shared by the Institute and H.M. Government. These bodies were ready to accept any approved architect under the age limit I have suggested. I have the greatest admiration for the courage with which this firm datum has been established as a sort of professional climacteric.

The thoughtless will no doubt ask: "Why fifty-six, rather than forty-six, or sixty-six?" And they will follow up this fruitless question with a number of individual examples designed to disprove the reasonableness of the datum. I am quite prepared to learn that there are men who preserve their mental and physical vigour beyond this age; but, as in all law-making, we must eschew all sympathy for the hard case, and confine our interest to the average welfare of the community. And there is no doubt that to the mind of most of us there will arise a picture of the great multitude of elderly practitioners who continue to make a living on more or less compassionate grounds, in a market already overcrowded with young and energetic geniuses. That these latter should be relegated to subordinate positions, and even cold-shouldered out of the profession, is the tragedy of the present times.

The old proverb, "Youth will be served," was never more important in its message than to-day, when we are suffering at all hands from an inertia which is typical of the mind that has lost its youthful vision. We cannot satisfy ourselves that the youth of to-day is devoid of vision and that the burden must be borne, therefore, by the older generations. Rather are we convinced that, given his chance in life, the young man of to-day would be found as alert and as ready as those of any other generation.

Too long has the enthusiasm of the young student been chilled by the dreary vista of years which stretches before him, before he can hope to be entrusted with any worthy work. I have no statistics before me, but I should be surprised to learn that the average age of the architects who have carried out works of over £50,000 value since the War is under sixty-five—a very conservative estimate. Accepting such a guess as erring, at any rate, not on the side of excess, we must be struck at once by the effect an enforced retirement at an age ten years younger than this average would have upon the prospects of young and middle-aged architects.

It may be urged that enforced retirement will be a grave hardship upon those elderly men who can still attend to business. The solution is obvious. For every job which the older man would have got under the old regime, the young man will receive one; and out of the increment so earned, he must be made to contribute to a pensions fund out of which his retired colleagues may be allowed to end their remaining years should they need the help thus provided.

Quite seriously, I do urge the point of view that, whereas we are all agreed that there are more architects than jobs, it is surely more sensible to eliminate from the ranks of those who have had a long run than from those who have yet to receive their chance. And it is the latter class whose members are being depleted by the shortage of work. For the past two years there have been many hundreds of young men walking about seeking subordinate positions, yet holding the highest qualifications. Many have been driven from the quest and have found humbler but more assured employment in other walks of life; and few of these will ever return to the gamble of architectural practice. The older man must make way for some of these, cheerfully and willingly if he will; by force, if he will not.

It is, of course, difficult to determine an age limit; but I feel that in suggesting the age of fifty-five, which may be deemed too early to relegate the architect to retirement, the error, if any, is on the side of the widest advantage possible to the profession at large, and the young man in particular.

POSITIVE.

The Opposer's View.

SIR,—I must confess that I find it difficult to picture the architect of fifty-four as an energetic youth, and the architect of fifty-six as a senile relic of Victorian days. If "Positive" finds it possible to adjust one conception with the other, I am content, at least, to acknowledge him as a sincere advocate of a policy with which I disagree. I am less concerned with the compassion he allows for the evicted architect who exceeds the age limit; and am more interested in the effects upon architecture.

The pension scheme he suggests may solve the financial problem, and apart from its fantastic and humiliating nature may be acceptable as a Socialistic expedient not altogether surprising in these times. But "Positive" suggests no pension scheme of talent whereby the retired men may contribute their experience and breadth of development to their more fortunately served but less fully equipped younger colleagues. I am, in fact, deeply concerned at a suggestion which would throw out of executive practice a whole list of eminent men I could write out, each and all of whom are at present making valuable contributions to the architecture of the times, and whose steadying influence has already saved us from the Continental excesses with which the youth of to-day seems so much obsessed.

But looking at the matter more broadly, I do not imagine I am an exception in having met men who are full of youth and energy when well in the seventies, and others who are doddering old men while still in the forties. Nor can I remember any experience that would lead me to suppose that the architect's powers begin to fail in the average case at so low an age as fifty-six. A datum must, of course, be generally arbitrary; but even so, it should be based on some average data, not marked blindfold on the principle of a game of "Tick, tack, to."

"Positive" is not quite correct as claiming on his side the Institute and H.M. Government, for these bodies have given particular reasons why this age limit was fixed in the specific cases in point, explaining that the job is likely to drag over a long term of years, and pointing to the desirability of the architect surviving the job. The reason may be unconvincing, but it at

least suggests that these bodies are sufficiently unsure of their policy as to feel called upon to explain. But even if they are partisans of "Positive's" policy, it seems strange that the deciding voices should be those of men mostly over their own age limit. If the architect is too senile at fifty-five, is it not strange that the judgment of men who have passed their own definition of efficiency should be accepted as wisdom?

The choice of an architect must be left to the judgment and discretion of the public, the horse-sense of which generally deprecated body is a good deal sounder than is generally believed. And if the public continues to employ mature architects, it can be assumed that these have been giving satisfactory service. In the meantime, the outstanding young man will find his way into such company, while the more average case will find steady employment under the guidance of mature experience, to his own benefit and good training.

There is no royal road to justice by law in this world, and the fewer restrictions we have upon the free competition of old and young the more satisfactory will be results.

NEGATIVE.

REGISTRATION

WE have received the following letter for publication :—

SIR,—The Councils of the Chartered Surveyors' Institution, the Land Agents' Society, and the Auctioneers' and Estate Agents' Institute of the United Kingdom, the three senior societies representing the professions of the land, have recently reviewed the question of the registration of those professions by Act of Parliament. They have each reached the unanimous conclusion that any measure which Parliament is at present likely to grant for the regulation and control of the professions of surveyor, land agent, auctioneer, estate agent and valuer, will on balance bring no benefit either to the public or to those professions.

Compulsory registration could only be secured, if at all, on condition that every person who was making, or was claiming to make, a living as a landed property practitioner was in the first instance eligible to be registered without regard to his professional qualifications. Thereafter a qualifying test imposed by the Registration Board would be a condition precedent to entry on the register. Only registered persons would be permitted to practise, to describe themselves as surveyors, land agents, auctioneers, etc., and to recover fees at law. Registered practitioners who were guilty of felony, misdemeanour, or of conduct disgraceful to their profession would be liable to be struck off the register and deprived of their livelihood.

No policy of statutory registration can succeed, nor indeed can be justified, unless it can be shown to be necessary on public grounds in order to protect the public not only from the dishonest practitioner but also from the dangers of unskilled advice. The case for registration of medical practitioners was unanswerable, but only because the uncontrolled activities of the quack doctor were a danger to human life.

It might have been thought that a strong case on public grounds could be made out for statutory control of the professions of civil engineering and accountancy as well as of the particular professions which we represent. All these professions have attempted, within the last twenty years, to obtain Registration Acts which would give them power to regulate their practice in the manner outlined above, but they have failed.

The architectural profession, after five years of effort, obtained in 1931 a Registration Act which is purely permissive in character and prevents nobody, qualified or unqualified, from practising as an architect. Registration on this voluntary basis would appear to afford no protection to the public. The recent history of registration, in so far as it affects professions other than those concerned with the care of life and health, points to the difficulty which faces the Legislature in granting anything approaching the powers which are required for proper and effective control.

These are facts which must be faced. We believe that statutory registration is of no value unless it gives full protection to the public. As we see no hope of Parliament passing a compulsory measure which will ensure that result either now or in the immediate future, we think it idle to indulge false hopes that an effective Registration Act is within the realm of practical politics.

So much for the public aspect of statutory registration. The question how far it would be of benefit to the professions which we represent is less important, and this is not the place or the time to ventilate it. We are satisfied, however, that to the properly qualified practitioner the disadvantages of registration outweigh any possible advantages.

The public can already shield themselves effectively, if they will, from the dangers which registration seeks to remove. The sooner the importance of professional qualifications is realised, the easier it will be to enforce the standards of professional conduct which we and other professional societies are endeavouring to build up for the protection of the public.

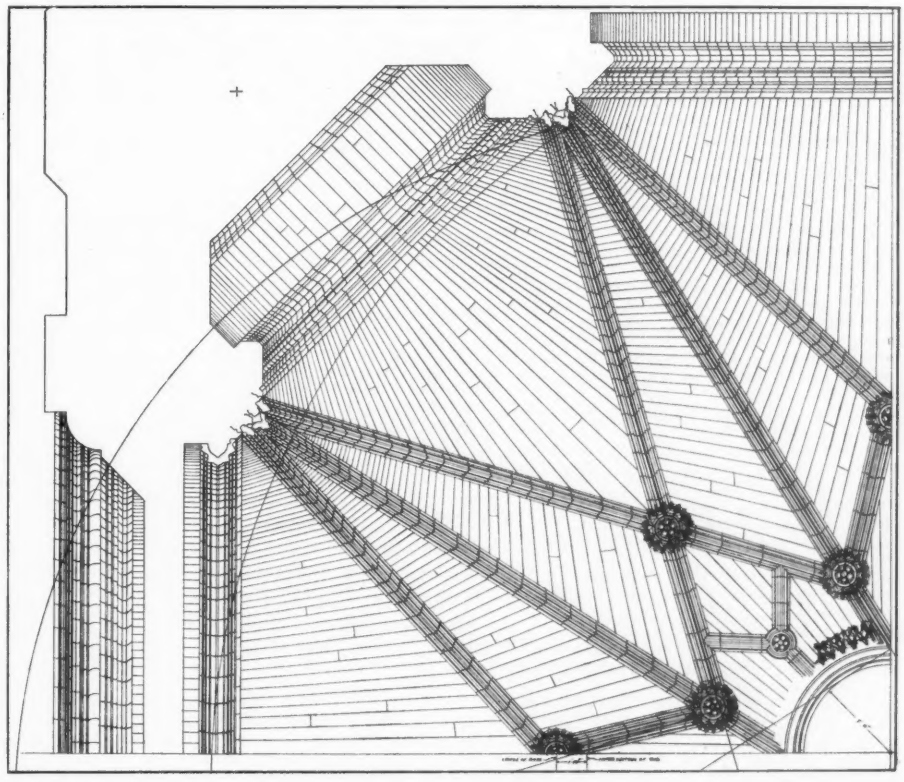
PERCIVAL F. TUCKETT,
President, The Chartered Surveyors' Institution.
CHARLES ALLIX,
President, The Land Agents' Society.
WM. ANDERSON,
President, The Auctioneers' and Estate Agents' Institute of the United Kingdom.

LIVERPOOL CATHEDRAL PROGRESS

THE *Quarterly Bulletin* of the Liverpool Cathedral Committee for September records that steady work during the preceding three months was put in on the vault above the crossing of the Western Transept. Some of the lower bosses are already *in situ*, but much still remains to be done before the main ribs are finished and the central keystone in position. It is recalled that some little time ago the architect (Sir Giles Scott) decided to tie the piers of the eastern nave arch back by two metal rods to the piers of the tower arch until the nave was built to take some of the outward thrust thrown on these piers by the vault of the crossing. These tie rods have now been put in position at a height of about 80 ft. above floor level. They are of mild steel, 2 in. in diameter, and each 62 ft. long, built in three sections connected by box nuts. They will be painted the same colour as the stonework, so as to be as little unsightly as possible, but they can at best be described as necessary evils, which it is hoped may act as a reminder to all who use the Cathedral of the need of funds to complete the building, as until this is done the rods cannot be removed.

At the beginning of September, 193 men, including 117 masons, were engaged on the work, and the north, south and west walls of the tower had reached a height of 131 ft.

The building has now advanced sufficiently to make it both practical and necessary to place the contracts for the stained glass windows, already given or promised, of the new section. It has been decided to divide the work between Messrs. Powell, of Whitefriars, and Mr. Hendrie, an artist whose art is, perhaps, at present better known in his native Scotland than on this side of the border. To Messrs. Powell have been allotted the two great groups of lights on either side of the tower, subject to donors being forthcoming for the three lancets on the south side. The windows of the western transept have been given to Mr. Hendrie to execute.



LIVERPOOL CATHEDRAL: PART PLAN OF VAULTING OF CENTRAL SPACE, UNDER TOWER.

R.I.B.A. PRIZES AND STUDENTSHIPS.

THE annual criticism of the students' work in the R.I.B.A. competitions for prizes and studentships was delivered on Monday night to a crowded "house" at the R.I.B.A. premises by Mr. G. Grey Wornum, F.R.I.B.A. The President occupied the chair. Preliminary business included the announcement of the recommendation of Mr. H. V. Lanchester as Royal Gold Medallist for 1934. Reference to this is made on page 38.

Introductory.

Mr. Wornum, in his introductory remarks, said that he had to review a very honourable and very valuable award of prizes. These grouped themselves into four sections—a study in architecture of to-day, for the Soane and the Bossom; study in architecture of yesterday, for the Tite-Neale Bursary, Measured Drawings Prize and the Essay Prize; a study in decoration, for the Owen Jones; and a study in construction, for the Grissell. It was a very fine array, and a wide choice.

The Soane.

The Soane was really the most difficult part of his task. The jury were, quite frankly, disappointed and had expressed their views in no uncertain terms. It was his difficult duty to break the news gently to the audience and try to find kindly and scholastic words by which to convey the jury's view. Twenty-two designs were sent in, the subject being an international temple of religion at Geneva. It read as a very grand and imaginative subject, but in defence of the designs submitted one might say that the subject was slightly unreal. Competitors, warned of the subject in general terms before sitting *en loge*, had mostly gone to the modern Continental churches for inspiration. Where more suitable architectural forms had been suggested, hopeless faults in scale appeared, apart from evidence of bad scholarship. Most of the lay-out schemes embodied had pockets that required no Beaux Arts training to see their weakness. The draughtsmanship was not of a high standard, either, to mitigate the disappointment that the jury felt. The designs pointed to an actual menace to the healthy growth of modernism in architecture. They made one realise that modernism was not a young man's job but belonged to middle age, or even older. Modern architecture was not dependent upon formula, but on fundamental thought. The latter, apart from divine gift, could only be achieved by the study of fundamentals of the classic—not so much in its minor details, which had so confused the issue with past generations, but in the direction of analytical study. That system of study had in recent years been greatly encouraged by the schools, but just as the past generations got led astray by their interest in historical detail, the modern generation appeared to be waylaid by hysterical detail—the all-horizontal window, the all-vertical window, the parabolic concrete truss, the cantilevered story, and the hair-pin bend. He was prepared to believe with the youngest of the students that there was a new world of form and expression round the corner yet to be explored and mastered. But we should not travel to it unarmed and unprepared. In present times exploration had failed in innumerable cases. The large glass window formula had already been found impracticable in Germany on account of temperature troubles. Some of the modern cantilever construction was grossly extravagant and difficult in execution, and the materials of which this modern form of expressionism took shape often lost both their attractiveness and goodness in the shortest of time.

The Tite Prize.

The results of the Tite prize could not be considered very satisactory, but that was partly due to the subject chosen. The subject was "a walled garden at the rear of a large London house." But the garden's dimensions, 45 ft. by 80 ft., offered small space in which to plant a little bit of Italy. The majority of the 18 designs submitted suffered from too much cutting up of the space and too small a scale for the various Italian features. The award had been given to "Nektia" (Mr. A. D. Kirby), who had submitted a good set of drawings and a simple design, though the charm of the garden would depend very much on whether the hedges would grow or not.

The Essay and Measured Drawings Prizes.

Nine essays were submitted in the essay prize. It should be borne in mind, said the speaker, that the object of the essay should be to provide something of use to students of architecture when published or filed. The Institute looked to the writers of the essays for contributions of real value, not for mere evidence of research among already published work. The subject chosen by the winner ("East Anglia"—Miss Olive Briggs, A.R.I.B.A.), and the way in which she had handled it, made the essay a definite contribution to the study of screens in East Anglian churches, and was more of the type of research work advocated by the late Professor Lethaby.

There were nine competitors for the measured drawings prize, and the jury had had considerable embarrassment in awarding the prize to "Roamer" (Mr. P. K. Pope), since "Lyric" (Mr. E. C. Scherrer) had submitted work so well deserving. The winner had sent in most remarkable drawings and surveys of the village of Richelieu, France, with detail drawings of its church. He (the speaker) commended attention to the survey book; rarely had a survey book been equalled for neatness and clarity. "Lyric" had submitted work from Spain, Florence, and Rome, and the draughtsmanship was very beautiful. Again, the survey sheets were unusually good.

The Neale Bursary.

The jury wished to commend the work of Mr. G. A. Crockett, Mr. J. N. Summerson, Mr. Howard-Leicester, and Mr. Frank Chippindale in this competition. After examination of the work of all those competitors the jury unhesitatingly awarded the Bursary to Miss Sadie Speight, for her work was of outstanding merit. She had studied exhaustively in Spain, and had produced a series of most brilliant measured drawings. The freehand work was most admirable and full of spirit and charm. The winner was at work upon a book on Spanish architecture of the Plateresque period. There was no doubt that that work would be a most excellent contribution to the somewhat limited information on its period in Spain.

The Owen Jones and Grissell.

In the Owen Jones studentship most of the nine entrants seemed to have eliminated all ornament and to have put their imagination into their reports. The subject was the decoration of a foyer to an opera-house, with anteroom at each end. The winning design submitted by "Dily" (Mr. A. E. Gordon) showed a great deal of thought, though with little applied ornament. His lighting had been well thought out, and his materials chosen with real consideration. He had opened up the full length of his rooms for "vista purposes." The walls were of polished perrycot stone, and the dull bronze mirrors over the doors were jointed to represent the treble and bass clefs. The floor was of wood, and the beamed ceiling was of concrete dusted over with gold. The lighting on the ceiling had been put out of centre, and was supplemented by flat illuminated marble mosaic niches between the doorways. Although ornament had been practically eliminated, the jury felt that the author was worthy of receiving the prize, and that he would make good use of the opportunity for study it would afford him.

The subject of the Grissell was a provincial terminal railway station, on a site 180 ft. wide and with six tracks. Ten designs were submitted, that of "Pedo" (Mr. Eric Bedford) gaining the prize. That design was the only one which allowed a separate entrance to the concourse for porters laden with luggage, and although there were many faults in the disposal of some of the departments and the concourse was unnecessarily high, there was good and generous circulation and exits, and the constructional calculations were very complete. The hon. mention design ("Stalky"—Mr. Norman Edgar) had good general disposition of parts, but poor exits and circulation.

The "Bossom" Prize.

The number and standard of schemes submitted for the valuable and welcome Alfred Bossom gold medal and travelling studentship had increased most gratifyingly since the inception. The subject was to provide on a site 170 ft. by 220 ft. an exchange for an association of merchants and brokers. The street frontages were to be developed for letting, and the upper part as offices. The jury for this subject—which included Mr. B. C. Aldous, of Messrs. F. and H. F. Higgs, and Mr. A. Overall, of Messrs. Hillier, Parker, May and Rowden—had been admirably chosen, and a deep debt of gratitude was owed to the two gentlemen named for their conscientious and valuable work. Unreserved congratulations could be offered to the winner, "Ponto" (Mr. G. D. Griffiths). He had produced an able and thoroughly practical design, showing in parts unusual ingenuity. He gained many points over his competitors, particularly in the planning of his ground floor and basement. The estimated cost (1s. 9d. per ft. cub.) was considered a little too low, and no quantity surveyor's fees had been included. With those adjustments, the scheme could still show a very satisfactory return. The drawings and detail report had been clearly and excellently presented.

The second place, carrying with it a silver medal, had been awarded to "Welvit" (Mr. T. A. Jeffryes) for a design with some unusual features. His solution to the problem showed much imagination and creative ability.

Vote of Thanks.

A vote of thanks to Mr. Wornum was proposed by Mr. W. H. Ansell, F.R.I.B.A., who remarked that the introductory remarks made by the Critic had been more than critical; they had been educational, and must have gone far to soothe the wounds of the competitors.

The vote was seconded by Mr. T. E. Scott, F.R.I.B.A., who said that the students' evening was one of the most important events of the year. Although the criticism was gloomy, students must look behind it. The Critic had probably done them the biggest service of all, for, however harsh, the criticisms were also kindly and came from one who was well known to be a skilful exponent of his art.

List of Awards.

The Tite Prize: A Certificate and £50 (for the study of Italian Architecture).—Subject: "A Walled Garden at the Rear of a Large London House," A. D. Kirby (School of Architecture, R.W.A., Bristol).

Soane Medallion and £150.—Subject: "An International Temple of Religion at Geneva," Hubert Bennett, A.R.I.B.A. (Victoria School of Architecture, University of Manchester).

The R.I.B.A. Silver Medal and £75 for Measured

Drawings.—P. Kennerell Pope (School of Architecture, R.W.A., Bristol). Certificate of Honourable Mention:—Emil C. Scherrer, A.R.I.B.A. (Victoria School of Architecture, University of Manchester).

The Owen Jones Studentship: A Certificate and £100 (for the study of Ornament and Colour Decoration).—Subject: "The Foyer of a National Opera House in London," Alexander Esmé Gordon (School of Architecture, Edinburgh College of Art).

The Royal Institute Silver Medal and £50 for an Essay.—(Miss) Olive V. Briggs, A.R.I.B.A. (The Bartlett School of Architecture, University of London).

Alfred Bossom Travelling Studentship: A Gold Medal and £250 (for the study of Commercial Architecture in America).—Subject: "An Exchange for an Association of Merchants and Brokers," George Davidson Griffiths, A.R.I.B.A. (London University Atelier). Silver Medal:—T. Arnold Jeffryes, A.R.I.B.A. (School of Architecture, Edinburgh College of Art).

Grissell Gold Medal and £50 (for the encouragement of the study of Construction).—Subject: "A Provincial Terminal Railway Station," Eric Bedford, A.R.I.B.A. (School of Architecture, Leicester College of Arts and Crafts). Cert. of Hon. Mention:—Norman Edgar, A.R.I.B.A. (Rutherford Technical College, Newcastle-upon-Tyne, and the Armstrong College School of Architecture).

The Hunt Bursary: £50 (for the encouragement of the study of Housing and Town Planning).—W. A. Eden, B.Arch.Liverpool, A.R.I.B.A. (Liverpool School of Architecture).

The Neale Bursary: £70 (for the encouragement of the study and measurement of Old Buildings).—(Miss) Sadie Speight, M.A.(Hon.)Arch.Manch., A.R.I.B.A. (Victoria School of Architecture, University of Manchester).

The Athens Bursary: £100 (for study at the British School at Athens).—W. B Edwards, M.A.Manch., B.Arch.Liverpool, A.R.I.B.A. (Liverpool School of Architecture).

The Ashpitel Prize, 1933 (Books, value £10, awarded to candidate most highly distinguished in the Final Examinations of the year).—Birkin Haward.

The Rome Scholarship in Architecture (£250 per annum for two or three years' study and research at the British School at Rome).—Alwyn Gwilym Sheppard Fidler, A.R.I.B.A. (Liverpool School of Architecture).

The R.I.B.A. Silver Medal and £5 in Books (for Students of Schools of Architecture recognised for exemption from the Final Examination).—E. T. Dowling (Architectural Association).

The R.I.B.A. Bronze Medal and £5 in Books (for Students of Schools of Architecture recognised for exemption from the Intermediate Examination).—N. C. Westwood (Architectural Association). Certs. of Hon. Mention:—H. Gibberd (Birmingham School of Architecture); F. W. Griffiths (Liverpool School of Architecture); (Miss) Mary Drysdale (School of Architecture, Edinburgh College of Art).

The Archibald Dawnay Scholarships (Two Scholarships of the value of £50 each for the Advanced Study of Construction).—John Holt (Armstrong College School of Architecture) and John Muskett (Liverpool School of Architecture).

The R.I.B.A. Prize for Art Schools and Technical Institutions (with facilities for the Instruction of Intending Architects (£5 in Books)).—E. G. Broughton (Portsmouth Municipal School of Arts). Cert. of Hon. Mention:—E. A. Jones.

The R.I.B.A. Prizes for Public and Secondary Schools.—(*a*) Essays: (i) £2 2s., B. W. Watkin (Bishop's Stortford College); (ii) £1 1s., (Miss) Margaret L. Harvey (George Dixon Secondary School for Girls, Birmingham); (iii) £1 1s., Geoffrey Robson (the Grammar School, Dudley, Worcester); (iv) £1 1s., Bruce Martin (Surbiton County School). (*b*) Sketches.—(i) £2 2s., Geoffrey Robson (Grammar School, Dudley, Worcester); (ii) £1 1s., John Agnew (Rock Ferry High School for Boys); (iii) £1 1s., M. A. J. Farey (Tonbridge School); (iv) £1 1s., H. H. Knopp (Polytechnic Secondary School, Regent-street, W.1).

The competition drawings are on exhibition in the R.I.B.A. Galleries, 9, Conduit-street, W.1, until January 27, between the hours of 10 a.m. and 8 p.m., Saturdays 10 a.m. and 5 p.m. (Sundays excluded).

The Tite Prize and the Victory Scholarship.

The attention of intending competitors is called to the fact that the preliminary competitions for the Tite Prize and the Victory Scholarship will be held in London and at centres in the provinces on Thursday, March 1, and Friday, March 2, respectively. Forms of application for admission to the preliminary competitions may be obtained at the R.I.B.A., 9, Conduit-street, W.1. The closing date for the submission of forms of application is Friday, February 9.

"ARCHITECTURE AND THE TIMES."

A MEETING of the Architectural Association was held on Tuesday at 36, Bedford-square. During the earlier part of the proceedings Mr. C. Lovett Gill (President) occupied the chair.

Mr. Hope Bagenal, D.C.M., A.R.I.B.A., contributed an address entitled "The Architect's Contribution to the Thought of His Time." He said that the distinguishing mark of a profession was that its corporative character, its charter of association, rested in some way upon a charge of public service. In addition to the idea of service, there was that of trusteeship, *e.g.*, the ethical rules of the Institution of Engineers provided that every corporate member should act towards his client in a strictly fiduciary manner. Professional men could, of course, be roundly criticised, but they served and guarded the public; and it was now being suggested that other sections of the community might imitate them in this.

Architecture and building together covered an enormous field of activity, and architects were conscious of the economic stresses of their great client, the public. They noted that, while houses and churches had to become cheaper, banks and commercial premises grew more expensive. They saw the upward trend of good taste always fighting against the downward trend of workmanship and the cheapening quality of goods. They studied hygiene and town planning, and were in the honourable army fighting to preserve the face of the country. They knew and loved the country builder, with his few craftsmen obstinately surviving, and often had to protect him against a smart modern client who wanted everything for nothing. Finally, ordinary domestic practice involved a continuous, friendly analysis of the English man and the English wife; and there the architect had to study ultimate desirables, *i.e.*, culture itself. To-day opinion got itself formed through no regular channels, but there were several strata of intellectual activity unconnected on vital points. At the top were the great investigators such as Einstein, lower down was the stratum of periodical technical literature, in which the main stream of knowledge now flowed. Between these two strata was the realm of general news and information expressed by the lay Press in all its branches—a realm that was very poorly served.

Speaking of town-planning, the lecturer said it was an example of an uphill educational process ignored by the Press, during which process the ideas of the educated classes gradually won their way and carried conviction against the semi-educated. Similarly, it was necessary to hammer away at the idea of quality as against quantity—we still had the tradition of quality in British industry. A most important duty of architects was to resist the suicidal cutting of prices due to a false economic theory. It must not be allowed that residential buildings should become cheap boxes of thin materials structurally safe, but transparent to vibrations of all kinds. Intensive study of structure had led to an over-emphasis of the engineering point of view. But an architect had to consider protection as well as safety, and mass had always been a ready means of securing protection—*i.e.*, procuring proper living conditions. Another factor was the right porosity. On mass and porosity hinged the problem of good building as distinct from engineering, and if a theory that concentrated on safety only was allowed to rule in a problem involving safety, *plus* protection, the so doing would be thoroughly unscientific. Unfortunately, mass and the right porosity cost money. False economy led to buildings that did not protect the public from noise vibration. Cheapening went right through modern building causing all sorts of troubles. The result was safe, but not protective and not durable. As with cheapness, so with rapidity. Good, sound building materials took time in the setting and drying process. Another reason why the rush job tended to bad building was that the operative could not take real interest in his work when he had not the time to do it properly. Good house-building was the central duty of architects, and a good house should last 200 years. An economic theory was a bad one that permitted the building of houses at a cost of about £350 each, inclusive of land, services and road-making, to be bought on the hire-purchase system at 9s. a week for twenty years, after which time the house was liable to fall down. If we wanted to fight the slums a national house-building scheme was absolutely necessary. Closely connected with the idea of quality was that of desirable simplicity.

Discussion.

The Hon. H. A. Pakington, who moved a vote of thanks to Mr. Bagenal, said that a picture had been placed before the meeting of the architect standing on the bridge between the producer and consumer, selecting and rejecting his materials; not merely acting as a filter of good taste and sound building, but converting material resources into spiritual values. He had shown how the architect in his high calling touched far more than the mere art of building, touched, indeed, the very art of life itself. It was of the utmost importance that architects as a profession, while applying their minds to material comfort and security as the basis, should insist that that was merely a means to an end; and they should attack the problem from the other end by insisting that the individual be educated to have a right judgment in all things, so that he could understand and test the propaganda that was bound to descend upon him. Architects drew inspiration from many sources of life, and they should see that the essentially logical, selective and ordered mind they had to bring to bear upon everyday problems should be applied also to those wider problems that lay at the root of their art.

Mr. J. Murray Easton seconded the resolution for a vote of thanks. He said the business of the architect was to think of everything that the client had not thought of, and of everything the engineer, town planner and other specialists had not thought of. The more fully the architect could incorporate each of those factors in his work the better architect he would be. This fact had its bearing on speeding up, for when the traditional speed of building was departed from, things happened that defied prognostication. For example, the architect imagined that he had taken every conceivable precaution, but owing to the building being erected too quickly, there was condensation in the electric conduits and the wiring had to be done over again in two years. One came across snags of that sort in every branch of quick building, and all would agree with Mr. Bagenal that mass and porosity were of the essence of comfortable building.

Mr. Harding Thompson, Mr. Trystan Edwards and others also contributed to the discussion, and Mr. Hope Bagenal replied, and the vote of thanks was unanimously accorded.

An Architect's Estate.

Mr. Charles Heaton Fitzwilliam Comyn (56), of Petts Wood, Orpington, architect and surveyor (net personalty £3,169), left £5,461.

THE DEGREE OF CONCLUSIVENESS OF THE FINAL CERTIFICATE

By W. T. CRESWELL, K.C.

Labour and Materials.

In building contracts of any magnitude, it is usually stipulated that the standard of work and materials is to meet the approval of a third person, generally the architect; and his judgment of the quality of such work and materials is then binding upon both parties (unless subject to review by arbitration) whether they are good or bad; since it is the architect who determines what is required to fulfil the standard of excellence agreed upon by the parties. Moreover, the covenant of the builder to supply proper work and materials is subordinate to the covenant to satisfy the architect.

If actual fraud or collusion cannot be proved in these circumstances, the genuine and final approval of the architect is a condition precedent, and bars any right of action on the part of the employer against the builder in respect to latent or patent defects. But if there is no such condition precedent, and the architect's approval is not final (or where there is a clause in the contract making the final decision of the architect reviewable by arbitration), then the architect's approval does not *debar* the employer from a right to bring an action to recover for such defects.

The Final Certificate.

Furthermore, when the contract provides for the final certificate to be given by the architect, that, too, when actually given, is conclusive and binding on both parties, when it can be shown that it is in fact a final certificate and an honest expression of his opinion, and that he has not been interfered with by either of the parties, and that the contract does not provide for arbitration in case of dispute or for opening up and revising or reviewing the certificate.

In such circumstances, the certificate may be carelessly, unskilfully, or even inaccurately made; nevertheless, employers must understand that in employing or agreeing to abide by the decision of an architect, however incompetent he is, they are bound by that architect's mistakes and errors of judgment. Both the parties to the building contract have chosen the architect, and must abide by their choice as far as the contract is concerned.

In Goodyear *v.* Weymouth and Melcombe Regis Corporation (1865), 35 L.J. (C.P.) 12, Willis, J., said : " It is said by the defendants that the architect was not at liberty to set aside the provision of the contract as to a written order being necessary [for extras]. There is a simple answer to this; if he has done his duty, he has not done so; if he has, he has decided erroneously; but that is a matter for his own conscience, and the Corporation have to blame themselves for appointing him."

It is therefore clear from this case that, whatever the architect honestly decides, the employer must stand by and must take the full responsibility for having appointed him.

" Extras."

When the contract gives an architect authority to give a final and binding certificate, the certificate is conclusive between the parties (provided it is not reviewable by arbitration, as before explained), even though it includes and certifies payments as and for " extras," work which in fact was comprehended within the original work contracted for, and which should not have been allowed as " extras "; for he, the architect, is the final judge as to " extras " and additions.

It must always be remembered that an architect may be liable both to the builder and employer for fraud, should it be proved that he acted fraudulently and dishonestly in the course of his duties; also, if he refuses to certify or, in certifying, did so dishonestly, either in collusion with the employer or builder or not. Moreover, although, as stated, the employer is bound, in the circumstances described, by the certificate of the architect, and, indeed, by all acts of the architect, so long as these do not exceed the scope of the latter's authority, the employer may nevertheless bring an action for negligence against the architect for lack of care and skill. As proof of negligence, he may plead, amongst other things, the amount he has paid in excess to the builder on the final certificate.

HOUSING BY PRIVATE ENTERPRISE

By J. R. TAYLOR

As was anticipated by many having an inside knowledge of the building industry, the response to the invitation to take over the provision of " housing " by private enterprise has fallen short of Ministerial expectations. In some districts, local associations of builders have, after careful consideration, declared the schemes put forward to be unworkable. Decisions of this sort, coming from bodies of men that are anxious to miss no opportunity for the employment of their capital and labour, are important, and require careful consideration.

It is admitted that there exists a large unsatisfied demand for houses, such as those which in the post-war period have been provided almost wholly by local authorities. Ordinarily, such a demand would evoke a supply. As it can be shown that the builder is eagerly looking for employment, and that ample capital is seeking a safe investment, the continuance of an unsatisfied demand (always assuming it to be a reasonable one) clearly indicates the presence of a " snag." In this case there are a number of obstructive circumstances all tending to deter the builder from employing his own capital, and generally discouraging the investment of privately-owned capital; and, as will be presently shown, there is insufficient inducement for the builder to function in the general proposals as to finance that have so far been made.

The problem is, of course, a national one, but for all that it will not be solved in the near future on inflexible lines. Unless large corporations, such as limited companies or public utility societies, take the place of public authorities, and put the work up to tender, something must be done to attract both the large and the small builder, and more particularly the latter. To build houses by the thousand is the problem of the cities and large towns; to build them by the hundred or the score is that of the small towns and larger villages; and of the two problems the latter is often the more difficult, and in many respects the more important. Though it has many aspects it is thought that a consideration of the problem as it presents itself to the builders in a town of some twenty thousand inhabitants will be of most general interest.

Such a town may at the present time have about one thousand municipally-owned houses in being, but still require some five hundred more before that upward filtration which is considered so necessary can begin to take place. It is these five hundred houses that private enterprise is asked to provide. From the very beginning of " housing," the demand will have included the five hundred would-be tenants, or at all events the great majority of them. Where, as in a town such as we have in mind, the council's policy has been to select tenants for their ability to pay rather than their need, it follows that (not to put it too high) the successful tenants now accommodated have been preferred to others. In other words, the Council have lapped the cream, and private enterprise is required to take the skimmed milk. Some such result would, of course, follow if the Council continued to build, and with a subsidy many were quite willing to continue building. In some few cases Councils would continue to build without a subsidy; for where the houses have been reasonably well built so that repairs are not in arrear, selectively tenanted so that rents are not in arrear, and carefully managed, schemes have shown a financial surplus. In still other cases councils, despite unsatisfactory financial returns, would continue to build for reasons other than those governing the investment of private capital.

Let it be granted, however, that at present building costs, houses can be built, and tenants found for them, at rentals yielding sufficient to provide interest on capital, cost of repair, management, and a sinking fund. There is still much to deter the private investor. Most unfortunately the question of housing has become one of politics, and there is no certainty that subsidies will not be restored, and local authorities be not only permitted but even urged to compete again with private enterprise. In the post-war period we have witnessed so many changes of policy that few would care to forecast the position in, say, twenty years' time. Building is at least a forty-year investment. In the pre-war period it was the small private investor who found the money for working-class houses in towns of about or below the same population as that which we have mentioned. This class of investor puts his money at the present time into some sort of security that can be readily converted. Curiously enough, his inherited regard for house property as an investment makes him the backbone of the building societies in regard to capital not definitely earmarked.

By inviting the building societies to find capital for the provision of houses on special terms the Government makes an admission. The small builder, if he availed himself of the terms said to be offered, would also make an admission of grave importance. Let us see what this amounts to in the view of the parties to the proposed deal. The Government admits that the provision of this class of house is not of itself a sufficiently robust form of enterprise to walk on its own feet, and offers a crutch. The building societies agree with the Government view, and offer to dry-nurse the invalid, on terms. Consulted, the local authority declines to commit itself until the proposed scheme has matured, the site been chosen, the plans prepared and approved by town-planning committee, and the building society's valuation been made, and may even then refuse to participate. To erect twenty-four cottages, the builder must buy, or induce his backer, if he has one, to buy two acres of land, lay it out to conform to a town-planning scheme, finance the building in at least the early stages, and then sell. And here comes the rub : sell at what price? As much as he can expect to get above a valuation cautiously made, and the amount of which is likely to be a more or less open secret. To finance and sell houses to individual owner-occupiers is something that a speculative builder understands and is able to handle; but to put up housing on terms such as those proposed is far from being an attractive proposition.

Criticism that is not constructive is not, however, of much service, for the houses are badly needed, and something must be done. A suggestion that has been tentatively put forward at meetings of local authorities, builders and other interested parties is that the local authorities should buy the land in bulk and resell it in parcels. Much more than that is needed. Were the land bought and laid out with roads, sewers, water and lighting mains, and then sold in parcels at developed cost, there would be some hope of attracting the small builder. With the help of his bank and his merchants (seldom refused to small builders of good repute), the builder could usually manage to complete a block of, say, four houses at a time, and get another block part way up. With a sympathetic local authority anxious to encourage private enterprise, the provision of land and lay-out would present no great difficulty and still less risk. At the worst, if after some builders had made trial and found it to be not worth while to proceed, the developed site would still be available

for a resumption of housing by the local authority. For my own part I do not think such a scheme likely to fail provided the inevitable red tape is not wound too tightly.

This proposal would be workable only where the authority really desired it to succeed. Many authorities are not only unsympathetic to the proposal to hand over housing to private enterprise, but are definitely hostile. In some cases it has been made quite clear in advance that the councillors have regarded compliance with the Ministerial instructions as to holding meetings with builders for the furtherance of schemes as a mere matter of form, and have made up their minds to be unaccommodating. It would have been much better to send representatives from the Ministry to attend these meetings so that questions of detail could be better dealt with by someone anxious to smooth out rather than create difficulties. At some of these meetings the Chairman's remarks could be summarised in a single sentence without misrepresenting him. It would read: "How can you fellows be so foolish as to imagine that you can compete with us, we being able to borrow on so much better terms, and build in much larger quantities, and so buy more cheaply?"

For the small builder the crux of the problem is that of finding purchasers for the houses at a remunerative price after he has built them. The fact that by compliance with certain conditions he may be able to obtain an advance of 90 per cent. does not strongly appeal to him. He must sell to live, and it is as to where the other 10 per cent. is to come from that he is most concerned. Building under contract, he is content in these hard times to take a very small profit, and is not too timid to accept some risks. But to ask him to purchase large blocks of land and develop and build houses at twelve to the acre without giving him any assurance that he will find purchasers is to ask too much.

CONTRIBUTORY NEGLIGENCE ON THE ROADS

We have from time to time called attention to cases where in motor accidents the question has arisen whether, although the defendant was palpably negligent, the plaintiff was prevented from recovering damages because of his own contributory negligence, and it is of extreme importance that this law of contributory negligence should be understood, because if it were duly apprehended it would considerably add to safety on the roads. In the recent Law Reports there are three cases dealing with this question, two of them affecting lorries, and although proposals have been recently put forward to amend the law, it may be doubted if the present law were understood and observed whether any amendment is really necessary, at any rate as regards vehicles. The law was very clearly expressed by Lord Hailsham in Cooper *v.* Swadling (1931, A.C. 1), a case we noted in our issue May 27, 1932; but before referring to the recent cases it may be well to repeat his statement here. "In order to succeed the plaintiff must establish that the defendant was negligent and that that negligence caused the collision of which he complains. If it is established by the plaintiff's own evidence or by evidence adduced on behalf of the defendant that the plaintiff could have avoided the collision by the exercise of reasonable care, then the plaintiff fails, because his injury is due to his own negligence in failing to take reasonable care. But if, although the plaintiff was negligent, the defendant could have avoided the collision by the exercise of reasonable care, then it is the defendant's failure to take reasonable care to which the resulting damage is due, and the plaintiff is entitled to recover."

This really means that the obligation to take reasonable care is placed upon both parties throughout the incident. The plaintiff cannot "flare" along and say, "If anyone is careless he will have to pay." Nor can the defendant rely upon the negligence of the plaintiff to escape liability. Throughout, each party has to exert reasonable care to avert collision. The recent cases serve to illustrate the above propositions of law, but each case depends upon its own facts, as was pointed out by the Court of Appeal in the recent case Tidy *v.* Bateman (*Weekly Notes*, December 9), and the principles have to be applied to the facts.

In Cooper *v.* Swadling (*ubi sup.*), on an evening in July, the time not being stated, a motor-car belonging to the defendant was being driven at about 30 or 35 miles an hour along a road on his right side of the road, and on approaching a cross road he gave due warning, when the plaintiff's husband riding a motor-cycle, no warning being heard from him, came out of the cross road, and a collision occurred, killing the plaintiff's husband. The jury found that the defendant was not negligent, but the Court of Appeal ordered a new trial on the ground that the jury should have been directed that, even if the plaintiff was negligent, a question should have been left to the jury whether if, despite his negligence, the defendant could yet, by reasonable care, have avoided the collision. On the evidence it appeared that the defendant had no indication of the presence of the plaintiff until he was within about eleven yards of him, and in such circumstances the House of Lords held this further direction to the jury was unnecessary.

It has to be noticed that the mere finding of negligence on the part of one party or the other does not determine the question. The real question is: Whose negligence was it that substantially caused the injury? and the necessity for taking care is placed on both parties right up to the moment of collision; but a person will not be held liable if actually "in the agony of collision" he does not take the best possible measures to avoid it. That is the effect of this decision in the House of Lords in Cooper *v.* Swadling.

We will now turn to the recent cases. In Taff *v.* G. W. Chitty and Co. (1933, 2 K.B.; 453), where, on a lorry, driven by steam, at 5.45 p.m. on a January evening, the driver, finding that the tail light had gone out, pulled up in the High-street, New Romney, about 9 inches from the kerb, but in a position between two lighted shops which was very dark. A motor cyclist riding up the street at a speed which was not known, but who never saw the lorry or the driver, who was standing at the back of it, collided with the lorry, and brought an action for the injuries he sustained. It was found that the lorry driver was negligent in stopping at the dark spot he did, but there was evidence that the cycle rider had a light which cast a beam for 15 yards, and that the cycle could easily be pulled up in that distance, and the Divisional Court reversed the finding of the County Court judge that the lorry was alone to blame, and entered judgment for the lorry owners on the ground that the cyclist had been guilty of contributory negligence, causing his injury, for he must either have failed to keep a proper lookout or have been travelling too fast or failed to keep his cycle under proper control. It is to be noticed that here the collision was with a stationary object, and the finding was that, using reasonable care, the cyclist could have avoided that object with the light he himself carried.

Another very similar case, Baker *v.* E. Longhurst & Sons (1933, 2 K.B. 261), was carried to the Court of Appeal. Just after lighting-up time an unlighted cart was going along the proper side of the road, which was dark, where the collision occurred, the nearest public lights being 20 yards away from the spot, when a motor cyclist collided with it. The County Court judge had held that the defendants, owners of the cart, were alone in fault and that contributory negligence had not been proved against the cyclist. A Divisional Court being divided in opinion, the judgment of the County Court judge stood, but one of the judges in the Divisional Court thought the case indistinguishable from Taff *v.* Chitty (*ubi sup.*), and that the appeal should be allowed. The cyclist had an acetylene lamp, which he said would show 30 yards ahead, and his evidence was that at the pace he was going, viz., about 15 to 20 miles, he could pull up in 10 yards, and the Court of Appeal held him to have been guilty of contributory negligence, because, on his own showing, he was either going at a speed at which he could not stop within those limits, or he was keeping a bad lookout, and judgment was entered for the defendants.

These seem clear cases, but each case must be decided upon its own facts, and this is illustrated by a case cited to the Court of Appeal in the last case for decision of that Court—Evans *v.* Downer and Co.—reported in a note to that case. There, on a moonlight night, a lorry was pulled up on the wrong side of the road outside a refreshment hut, but in shadow from the light from the moon, and there was a conflict of evidence if the rear light was burning. In a parking place opposite the hut was another lorry so placed that its lights threw a beam of light across the road. A third lorry travelling along the road, at what speed it is not stated, ran into the lorry stationed by the hut, and the driver stated that the beam of light prevented him from seeing the stationary lorry. Judgment had been given holding the stationary lorry alone to blame, and the Court of Appeal held there was just enough evidence to support the jury's verdict.

Lastly, there is the case Tidy *v.* Battman (*Weekly Notes*, December 9), which supports this last cited case that the facts must be considered and not be confused with the questions of law. On a night in February, at 7.45 p.m., a lorry was drawn across a main road so as to obstruct about two-thirds of the road, and to persons coming along the road it was then unlighted. A motor-car approaching it had pulled up on the near side of the road about 10 ft. from the lorry. A motor-cycle came along the road behind the motor-car, the driver of which had given a signal that he was about to pull up, but the rider of the cycle, which was travelling at about 35 miles per hour, drew out from the motor-car and crashed into the lorry and was killed. The jury had given a verdict for the plaintiffs, the father and mother of the cyclist, and the Divisional Court, with some hesitation on the part of one of its members, had dismissed an appeal. The Court of Appeal affirmed this judgment, holding that there was ample evidence that the defendant lorry was negligent, and that the deceased could not by the exercise of ordinary care have averted the consequence of that negligence.

We have shown that the duty to take reasonable care exists in all the stages of a collision, but a word may be said as to the onus of proof. In the first place the onus is placed upon the plaintiff to make out his case, but if once he has proved negligence on the part of the defendant, then the onus is placed on the defendant to prove contributory negligence, but the circumstances may be such that the plaintiff by his admissions or those of his witnesses, or upon undisputed facts, as to enable the Court to say that contributory negligence was so proved that no jury acting reasonably could find any other verdict except that the accident was due to the contributory negligence of the plaintiffs (see per Greer, L. J., in Baker *v.* Longhurst (*ubi sup.*).

Bequest for Mural Paintings.

It is announced that the widow of Mr. E. A. Abbey has left a large sum to the Royal Academy for a fund for giving commissions for mural paintings, and that at the Royal College of Art, in South Kensington, an experimental studio for mural painters is being established.

ILLUSTRATIONS

PLATES.

A Fantasy of the Sixteenth Century.

The scene of this fantasy is composed to illustrate life in a Continental city during the first quarter of the sixteenth century. The spirit of the Middle Ages is being succeeded by that of the Renaissance; although old methods of fortification linger on and the Gothic system of construction is still in being. The figures depict a royal visit, when the ruler meets the city dignitaries. Above the assemblage of tiled roofs and diminutive churches is the great bulk of the cathedral, the nave of which is being rebuilt. Professor Richardson has drawn largely from his sketch-books for authentic detail, and in this regard his composition is reminiscent and strangely real.

Manchester Reference Library.

The Manchester Reference Library, as will be seen from our illustrations, is well advanced towards completion. The design, by Mr. E. Vincent Harris, was selected in open competition, and in a final competition with five other architects. The competition designs were fully illustrated in our issue for October 7, 1927.

The following firms, among others, are associated with the work: Bellman, Ivey and Carter, Ltd., Scagliola work; Banister Walton and Co., Ltd., steelwork; Etchells Congdon and Muir, lifts; Morrison, Ingram, Ltd., sanitary fittings; May Acoustics, Ltd., acoustic tiling; Mather and Platt, Ltd., sprinkler installation; J. Stubbs, Ltd., marblework; J. Tanner, Ltd., plasterwork.

St. Pancras Town Hall.

The site for the new town hall for St. Pancras is on the south side of Euston-road, with a frontage of 260 ft. facing St. Pancras Station, and of 240 ft. to Bidborough-street on the south. It has a depth of 130 ft., bounded on the east by Tonbridge-street and on the west by Judd-street. The building will be four stories in height, and will contain, as well as the council chamber and offices, a public-assembly hall, with gallery, capable together of seating over a thousand people, with separate entrances in Bidborough-street and other emergency exits. This assembly hall, although independent of the town hall, will be readily accessible from the council suite. The assembly hall is provided with a stage 56 ft. by 18 ft., also a green room and separate accommodation for men and women artistes. It is proposed to erect the building as a steel-framed fireproof structure, with Portland stone facings to all four elevations, and to cover the roofs with thick green Westmorland slates. The accommodation provided may be studied from the plans reproduced.

The architect is Mr. Albert J. Thomas, F.R.I.B.A.

South London Hospital for Women.

This illustration shows the completion of about two-thirds of the façade to Clapham Common. The completed portions comprise a new out-patients' department, the administrative offices, wards and rooms for private patients, and accommodation for the nursing staff. Messrs. William Downs, Ltd., are the general contractors. Sir Edwin Cooper, A.R.A., is the architect.

Devonport Nurses' Home, Greenwich.

The completion of the Nurses' Home of the Seamen's Hospital, Greenwich, is shown in this illustration The elevational treatment is simple and refined, in brick facings with stone dressings. The accommodation consists of visitors' room, sisters' sitting-room, nurses' sitting-room, probationers' sitting-room, writing room, two classrooms, a large reception room, cookery demonstration room, and the necessary kitchen and cloakrooms. The upper floors have nurses' bedrooms, each of which has a lavatory basin with hot and cold water, bathrooms, etc. Messrs. Foster and Dicksee, Ltd., are the general contractors.

Sir Edwin Cooper, A.R.A., is the architect.

"The Builder" Map of the County of London.

The Builder Map of the County of London, which we publish this week by special permission of the London County Council, shows not only the Surveyors' Districts under the Building Acts, but also the town planned areas, which are indicated by a red tint. We are informed that the Town Planning schemes in operation in the County of London are:—

County of London (Streatham Common) Town Planning Scheme No. 1.

County of London (Highgate and Hampstead) Town Planning Scheme No. 3.

Our readers' attention is specially drawn to these two areas, in which the scheme is fully operative, as the Minister has given his final approval. The remaining tinted areas are in the General Interim Development Order stage. Intending developers and others should make themselves acquainted with further progress by calling at the County Hall.

The R.I.B.A. New Premises.

We illustrate the Portland-place elevation of the new premises of the R.I.B.A., which are now in course of erection. Mr. G. Grey Wornum, F.R.I.B.A., is the architect.

College of Nursing and Cowdray Club.

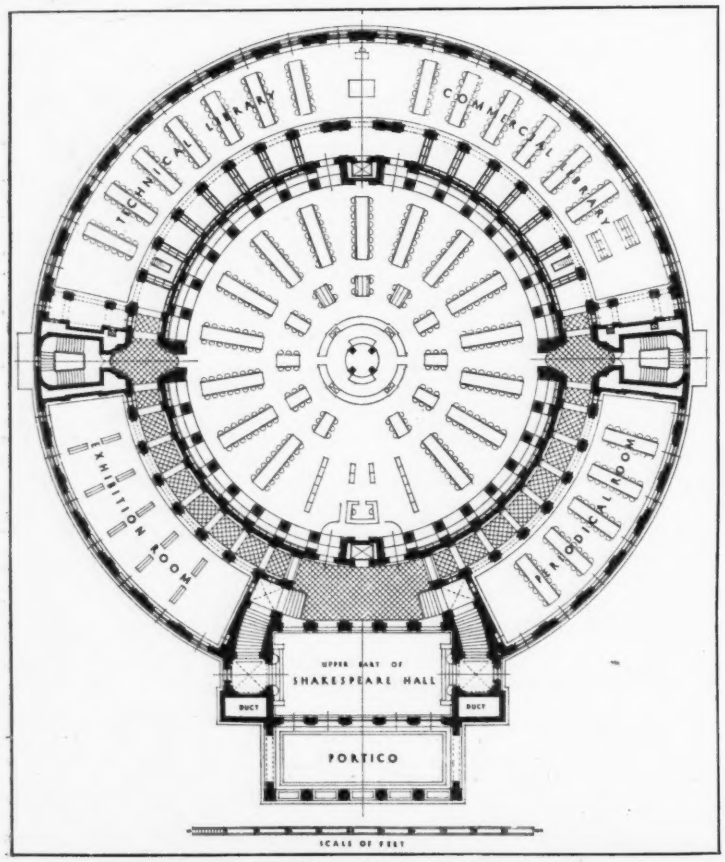
These illustrations show the completion of these buildings, which have elevations to Cavendish-square and Henrietta-street. The material used is Portland stone, and the general contractors are Messrs. John Mowlem and Co. Sir Edwin Cooper, A.R.A., is the architect.

Dollis Hill Post Office Engineering Research Station.

The main research block of this group of buildings, consisting of a structure some 286 ft. long, with three principal floors, stands in an imposing position on the crest of Dollis Hill, facing south. To it, on the northern side, is attached the central block, a building of similar height, and a number of independent single-story laboratories east and west of the central block, connected with the latter and with the main block by covered ways. Separated from the northern end of the central block by a roadway is the Automatic Training School building of two stories, and further to the north lies the workshop, arranged in a building some 240 ft. long and 40 ft. wide. The remainder of the station to the northward is occupied by the construction park, laid out for the demonstration of various processes involved in the outdoor activities of the Post Office engineering staffs.

With the exception of the workshop building, which is of steel construction, with walls and roof covered with Robertson's protected metal, all the buildings are of brick construction. The architectural treatment has been kept on simple lines, an endeavour being made to suggest a scholastic feeling in the buildings generally. The brick facings are of Sussex clamped stocks, with red "Danes-hill" dressings to door and window openings. The principal elevations of the main research block have been further embellished by a limited use of Portland stone in plinth, string course, cornice and dressings. The main feature of the south elevation is an arched recess, starting at the first floor level, flanked by Corinthian columns formed in brickwork and surmounted by a gable marking the axial line of the whole of the station layout. The roofs of the main building and of the central block are covered with Cornish slates, while at the apex of the main roof and above the centre of the building stands a ventilating flêche constructed of teak and covered with copper crowned with a weather vane symbolical of the activities of electrical force in the world. The independent laboratories and the covered ways are flat, roofed with asphalt. Steel casements are used for the windows throughout.

The general contractors for the Research Block, which is illustrated, were Messrs. A. Roberts and Co., Ltd., of Kensington; for concrete roadways and drainage, G. Percy Trentham, Ltd., Hillingdon, Middlesex; for asphalt surfacing to roadways, Val de Travers Co., Ltd. The principal sub-contractors were:—Ed. Wood and Co., Ltd., Manchester, structural steelwork; F. J. Barnes, Ltd., Portland Stone; Ragusa Asphalte Paving Co., Ltd., asphalt work; Braby and Co., Ltd., steel staircases and copper work. Other principal contracts include the following:—



MANCHESTER REFERENCE LIBRARY: FIRST-FLOOR PLAN.
MR. E. VINCENT HARRIS, Architect.

J. Walker (Architectural Decorations, Ltd.), stone carving; Crittall Manufacturing Co., steel casements; North British Rubber Co., Ltd., rubber flooring; G. Johnson Bros., wrought-iron gates and copper lamps; Hill and Smith, Ltd., Brierley Hill, Staffs, wrought ironwork to staircase; Vigers Bros., Hollis Bros. and Co., Ltd., Jos. Ebner, wood-block flooring; F. Troy and Co., Ltd., J. Greenwood, Ltd., and Educational Supply Association, Ltd., cupboards and benching.

The architect was Mr. A. R. Myers, O.B.E., A.R.I.B.A., F.S.I. (H.M.O.W.).

Dorking Post Office and Telephone Exchange.

The main fronts of this building are faced with the Dorking Brick Company's 2 in. hand-made, purple facing bricks, and the same firm's cherry red facings are used for the ground floor and the dressings to the windows. Portland stone is used for the plinth, band courses, keystones and main cornice. The architectural character of the building is Georgian, with a semi-circular arched treatment predominating on the ground floor. Accommodation for public office, sorting office, telephone exchange and transport is provided in the building.

Messrs. E. H. Cummins and Co., Ltd., of Dorking, were the main contractors for the work, and the following were sub-contractors: Standard Steel Co. (1929), Ltd., structural steel; Wandsworth Stonemasonry Works, Portland stone; The Granite Paving Co., pre-cast concrete, etc.; Concrete, Ltd., hollow tile roofing; W. C. Greenslade and Co., plastering; Allard and Co., Ltd., fixing of tiles made by Messrs. Pascall; Field and Palmer, Ltd., and Messrs. Ruberoid, sheet roofing; Williams, Gamon and Co., patent glazing; Doodson and Bain, Ltd., metal windows and doors; Battle Steel Window Co., lay-lights; May Acoustic Co., acoustic plaster; Frome Metal Co., bronze lamps; Rust's Vitreous Mosaic and Tile Co., mosaic flooring; Mr. H. J. Herridge, stone carving.

The building was carried out under the supervision of Mr. D. N. Dyke, O.B.E., F.R.I.B.A. (H.M.O.W.).

Loughton Post Office and Telephone Exchange.

This post office, which comprises public and sorting rooms and staff accommodation, faces the road to Epping, and the telephone exchange, which is for manual working, and comprises apparatus and switch rooms and operators' quarters, is situated in a parallel residential road. The materials for the elevations were: Portland stone, Sussex kiln stock bricks, with Collier's red bricks for dressings; deal casements to post office and steel casements to telephone exchange, and plain tiles. The builders were Messrs. H. J. and A. Wright, Gt. Missenden, and the principal sub-contractors were: Ham, Hill and Doulting Stone Co., Permanite, Ltd., E. Wood and Co., Malcolm McLeod, Diespeker, Ltd., T. and W. Ide, and E. Mathews and Co. The contractors for finishings were: J. Thompson, Beacon and Co., steel sashes; French Asphalt Co., roof asphalt; Farmer and Sons, fire escape stairs; Clark, Hunt and Co., iron railings; A. M. Macdougall and Son, wood block floors; Carter and Co., floor tiling; E. Cribb (Ditchling), modelling and carving.

The architect was Mr. A. Scott, M.B.E., F.R.I.B.A., (H.M.O.W.).

Head Post Office, Dagenham.

This new post office is planned with the main front to Boxall-road, near to Wood-lane, which is one of the through roads on the Becontree Estate. The architect, in designing the exterior, was influenced by the traditional brick architecture of Essex, and also by the necessity for harmonising the elevational treatment with the simple domestic note of the dwellings in the vicinity erected by the London County Council. Externally an all-brick treatment has been adopted. Inside the public office is panelled dado high in oak, with the telephone cabinets and other fittings designed as a definite architectural whole. The floor to the public office is paved with brown heather tiles, which harmonise with the general brick treatment, and give a pleasing colour tone when contrasted with the oak panelling and fitments.

The general contractors were Messrs. A. Roberts and Co., Ltd., and the following firms were associated with the work:—The Crittall Manufacturing Co., metal casements; W. H. Heyward, Ltd., Huddersfield, patent glazing to the roof lights; The Caxton Floor Co., flooring; Edward Wood and Co., Trafford Park, Manchester, structural steelwork; Vigers Bros., wood block flooring; G. and E. Bradley, Tottenham, heating installation; bronze work being supplied and fixed by The Luco Art Metal Co., Ltd., and Mr. Cadman, Dulwich.

The architect was Mr. F. A. Llewellyn, of H.M. Office of Works.

HYMN BOARD AND PROCESSIONAL CROSS, WOLDINGHAM CHURCH.

Falmouth Post Office and Telephone Exchange.

This building, completed in 1931, occupies a commanding site on the moor adjacent to the municipal buildings. The lower story is faced with local granite from the Penrhyn quarries, with rough cast above, and granite dressings to windows, and the roof is covered with random green grey slates. Fire-resisting construction is adopted throughout. On the ground floor the following accommodation is provided: Public office, postmaster and clerks' rooms, telegraph instrument and phonogram rooms, letter sorting office, with the clerks' and postmens' retiring rooms. On the first floor are the telephone apparatus room, battery room and womens' retiring rooms. The telephone switch room, inspector's and workmen's rooms occupy the top floor.

The general contractors were Messrs. J. Williams and Co. (Cornwall, Ltd), St. Austell, and amongst the sub-contractors were the following: Messrs. Rusts, vitreous tile flooring; Penbethy, Delabole Quarries, Ltd., slating; Blight and White, Ltd., Stonehouse, Plymouth, constructional steelwork; The Kleine Co., Ltd., hollow tile roofing; Stevens and Adams, wood block floors; Limmer and Trinidad Asphalt Co., Plymouth, asphalt work; Jackson and Sons, London, fibrous plaster; Starkie, Gardner and Co., weather vane; Doodson and Bain, Ltd., Manchester, steel casements.

Mr. A. Bulloch, F.R.I.B.A. (H.M.O.W.), is the architect.

Mander Memorial, Wolverhampton.

This memorial, to Sir Charles Tertius Mander, Bart., has been erected in the Collegiate Church of St. Peter, Wolverhampton. The carved figures on the memorial, which is in English oak, are, right hand, St. Thomas à Becket—Martyr, and, left hand, King Charles I.—Martyr, both having historic connection with the church. Gilding and colour are used in the heraldry. The whole of the work has been designed and detailed by the architect, Mr. James A. Swan, F.R.I.B.A., Birmingham, and executed by Messrs. Pancheri and Hack, of Bromsgrove, Worcs.

Inchcape Memorial Church of St. Paul, Woldingham.

Recently erected on the chalk Downs of Woldingham, this memorial church is appropriately constructed of flint and stone, in the traditional manner of the north-eastern counties. The tower is placed at the west end, where a large window terminates the western vista. The south porch above its flint plinth consists of open oak timber work. There is a second door to the north, between the tower and the nave, set in solid flint masonry, for use during south-western gales. The nave and chancel are roofed with open roof-trees and wind braces, which show against the plain plaster vaults. The roof of the sanctuary is domed in stone. The altar is of solid and open construction. The mensa is of solid oak and is carried by four oak columns, two of which are spirally twisted, and the centre is supported by a solid block of English oak inlaid in front with a foliated cross. The design is in the form of the early Byzantine stone altars. The cross and candlesticks on the altar, presented by Lady Margaret Shaw, were made by Mr. F. J. C. Cooper. The furnishing is in oak, the chancel fittings and pulpit and oak angel in the roof being by Laurence Turner. The font is by Fenning & Co. Messrs. John Daymond & Son, Ltd., were responsible for the processional cross, 5 ft. long overall, in solid satinwood, the line border and sacred monogram (both sides) being inlaid with rosewood, the shaft fumed oak, terminated at foot by a moulded "shoe" in cast bronze; also for the hymn-board in fumed oak, the lettering and emblem inlaid with synthetic ivory; and for the whole of the oak seating in the nave. The heating system was designed by Dr. Oscar Faber. The organ, which will be installed later, is by Messrs. Harrison & Harrison, of Durham. Messrs. Holloway Bros. were the builders (foreman, Mr. A. E. Clark). Sir Herbert Baker, R.A., F.R.I.B.A., was the architect.

The Alliance Assurance Building.

Standing on a site which is almost square, this new building has elevations to Throgmorton-street, Bartholomew-lane, and Capel-court. It has eleven floors in all, three below ground level and eight above, and the general height above pavement level is 117 ft. The accommodation on the two principal floors may be studied from the plans reproduced. The fourth, fifth and sixth floors are for letting, and a separate entrance to these is provided in Throgmorton-street. The entrance hall and staircase walls to the insurance company's premises are lined from floor to ceiling in polished Portland stone, a material which is also effectively used in the general office, with its large public space. The staff lunch-room, kitchen, men's staff lockers, and the bulk of the staff lavatories are accommodated on the lower ground floor, while the first and second floors contain the company's various departments. The third floor is the management floor, containing the board room, committee room, general manager's room, assistant general manager's room, secretarial suite, and directors' dining room —all panelled in mahogany and floored with Indian teak. All the chief rooms have acoustic ceilings.

Messrs. Trollope & Colls were the general contractors, and the following persons and firms were associated with the work:—B. L. Hurst, M.I.C.E., M.I.M.E., consulting engineer; A. J. H. Sprague, F.S.I., quantity surveyor; Willment Bros., demolition; Highways Construction Co., Ltd., asphalt; Braby & Co., pressed steel staircase, lift enclosure; Brookes, Ltd., Cornish granite plinths; Hobbs, Hart & Co., strong rooms, etc.;

Kleine Co., fireproof floors; Wandsworth Stone Co., stonework; Express Lift Co., lifts; Young, Austen & Young, heating and ventilation, oil firing; F. H. Wheeler, electrical work; J. W. Gray, lightning conductors and flag-pole; Henry Hope & Sons, casements; Hathern Station Brick and Terra Cotta Co., faience; Mather & Platt, dry rising mains and foam inlet pipes; John Bolding, sanitary fittings; J. A. King & Co., pavement and roof lights; Messrs. Jenkins, polished wall linings; Morris, Singer & Co., wrot iron work; Christie & Grey, "Coresil" foundation plates; Fenning & Co., polished wall linings; Richard Crittall & Co., kitchen equipment; W. B. Simpson & Co., tiling; Shaws Glazed Brick Co., interior faience to restaurant; Carter & Co., faience tiling to staircases and corridors, Carterazzo treads and risers to pavings; James Clark & Son, glazing; Starkie Gardner & Co., bronze and wrot iron work; Crittall Manufacturing Co., bronze laylights; T. B. Colman & Sons, revolving doors; Nettlefold & Sons, ironmongery; W. Aumonier & Sons, fire badges; India Rubber and Gutta Percha Co., Ltd., rubber flooring; Joseph Avery & Co., blinds; Horton & Co., liquid soap containers; Plastering, Ltd., fibrous plaster and granolithic; Stevens & Adams, wood block flooring; Mayfair Spraying and Decorating Co., paintwork.

Messrs. Joseph and Mewès & Davis were the joint architects.

A House at Radlett, Herts.

In the design of this little house, now being built on a high and open site at Radlett, the dominant consideration was to secure a straightforward simplicity, both outside and in, combined with economy of upkeep. Hence, there is a minimum of painting: windows are of steel in brick openings, doors are of oak left untreated, and the internal finish is of the simplest. The exterior is of local hand-made bricks and tiles. Messrs. Baillie Scott and Edgar Beresford, FF.R.I.B.A., are the architects.

Proposed Flats at Surbiton, Surrey.

This building is a group of four little self-contained dwellings, combined for convenience into a simple rectangle, which suggests externally a pair of semi-detached houses. The fact that it was to be placed at right angles to the roadway has, however, caused its condemnation by the local Council, since it cannot thus comply with the letter of the by-law which demands an open space at the "rear" of every house! The architect is Mr. Edgar Beresford (of Messrs. Baillie Scott and Beresford, FF.R.I.B.A.).

The "Commodore" Cinema, Orpington.

The plans of this cinema provide for an up-to-date theatre accommodating about 1,000 persons. All furnishings and equipment are on modern lines. Heating and ventilation are effected by a Plenum plant, and cleaning by a central vacuum installation, housed in the basement.

The general contractors were Messrs. Pitchers, Ltd., and amongst the sub-contractors were Clark and Fenn, Ltd., fibrous plasterwork, decorative plaster, textural work, and light steel bracketing; Young and Co., steelwork; Carpets and Curtains, Ltd., proscenium curtains and stage settings; S. Mulliner, Ltd., ventilating plant; Sturtevant Engineering Co., Ltd., vacuum cleaner installation; Garton and Thorne, Ltd., art metal work; Christie Unit Organs, organ; Electrical Installations, Ltd., electrical work; Kamm and Co., Ltd., projection room equipment and sound installation; Accurate Check Taker, Ltd., box-office equipment; W. Lusty and Co., seating; F. Burkitt, Ltd., fire appliances; Pontifex and Co., sanitary equipment; Strand Electric Engineering Co., Ltd., lighting equipment; Emerson and Norris, artificial stone; Universal Asbestos Co., roofing tiles; and W. Cassey, Ltd., door furniture.

The architects were Messrs. Leslie H. Kemp, A.R.I.B.A., and F. E. Tasker, A.I.A.S.

Central Police Station, Birmingham.

This scheme was undertaken in order to remedy the unsatisfactory conditions under which several of the police departments were working, and to provide much-needed additional accommodation consequent on the extended duties which the police are now called upon to perform. The building will accommodate the "A" Division police, women police, lost property, and public carriage and explosives departments, all these departments being provided with a separate entrance. The structure is of steel-framed type, the floors being constructed of 4 in. "King Tile" terra-cotta blocks supported by filler joists at 3 in. centres, and having a covering of 3 in. brick concrete. The main beams are encased solid in concrete.

The stanchion bases are of the "bloom" type, with the shaft held in position only on solid steel slabs, varying in thickness from 1½ in. to 3½ in. according to the particular loading. This is the only instance, so far, of this type of foundation being used in Birmingham. The stanchion bases and walls are supported on continuous reinforced concrete foundations 3 ft. deep generally, and calculations were based upon a safe bearing pressure on the ground of 4 tons per square foot.

The stone dressings to the front elevation are of Whitbed Portland stone, and the bricks are sand-faced, from the Aldridge Colliery Co., Ltd., laid four courses to the foot and backed with "Flettons" laid to the same coursing. The roofing on the front block is covered on the front elevation with Italian tiles, hand-made and sand-faced.

The building contractors were Messrs. Maddocks and Walford, of Birmingham, and the following firms were associated with the work:—John Bennie, Ltd., lift; Hill and Smith, Ltd., Brierley Hill, Staffs, wrought ironwork; Dunlop Rubber Co., Ltd., Manchester, rubber paving; Brook and Co., Ltd., Liverpool, wood block floors; Pavino Flooring Co., Birmingham, terrazzo work; Stourbridge Glazed Brick and Fireclay Co., Ltd., Dudley, wall tiling; W. E. Farrer, Ltd., Birmingham, sanitary fittings; Roberts, Adlard and Co., Ltd., roof tiling; James Gibbons, Ltd., Wolverhampton, locks, lockers, etc.; W. Bloye, Birmingham, stone carving; Flexo Plywood Industries, Ltd., plywood; Hoskins and Son, Ltd., Birmingham, uniform fittings, furniture and lockers; Gaskell and Chambers, Birmingham, refreshment room fittings; Lee, Longland and Co., Ltd., Birmingham, blinds.

Mr. H. H. Humphries, M.Inst.C.E., City Engineer and Surveyor, was the architect.

CONCRETE POSTS

A CORRESPONDENT writes for information as to a suitable size for concrete posts, length and section, to carry a 15 ft. long boundary fence with ½ in. weatherboarding 6 ft. in height. He asks whether the posts will require cementing into the ground for this short run. Inquiry is made as to the size of the cross pieces to take the boards, and what is the most convenient shape of these to fix to concrete posts. Further questions are as to the thickness of bolts and nuts and washers to fix cross-pieces to concrete posts, or whether the concrete posts should be cut away to let in the cross-pieces.

Manufacture of Concrete Posts.

A span of 15 ft. between posts is not recommended for a fence 6 ft. high. It would be advisable to use three posts, one at each end and one in the centre, so that each span is approximately 7 ft. 6 in. The posts should be 8 ft. long to allow 2 ft. to be buried in the ground, and the soil should be well rammed when the posts are erected. If the ground is poor it would be advisable to bed the posts in weak concrete (say, a 1 : 8 mix), but ramming is sufficient in good ground.

The concrete posts should be 6 in. square; if desired, they may taper from 6 in. at the base to 5 in. at the top, but this adds to the labour of mould making and is not necessary unless it is desired for the sake of appearance. The tops of the posts may be shaped to a pyramidal form and rounded for the sake of appearance. It may also be mentioned that smaller posts would have sufficient strength to carry the fencing and resist wind pressure, but they would be less convenient for forming holes to carry the rails, as described later.

The reinforcement should consist of four ½ in. mild steel round rods. These should be cut to lengths of 15 ft. and bent hairpin shape so that the sides of the "hairpin" are 3¼ in. apart. Two of these "hairpins" are needed for each post, and are placed in the concrete so that the bend is at the top of the post. Before they are placed in position they should be firmly wired together with ¼ in. iron wire, bent around the four rods so that they form a square cage with a space of 3¼ in between each rod. These binding links should be spaced at intervals of 1 ft. The mould need only be a wooden trough with internal dimensions 8 ft. long by 6 in. wide by 6 in. deep. If a pyramidal or other shape is required to the top of the post, a piece of wood is cut to the desired shape and placed in one end of the mould, or this can be made of plaster.

As weatherboard is to be used for the fence, it will be necessary to use wood rails spanning between the posts about 6 in. from the top and 6 in. from ground level. These will be slotted into the posts. In the case of the end posts it is therefore necessary to form holes for the rails through half the thickness of the post, and this is done by screwing a piece of wood the size of the rails to be used, 3 in. thick in the bottom of the mould. This piece of wood should be slightly larger at the bottom than at the top, so that the taper will allow it to be easily taken out of the post. In order to clear the steel in the post the wood rails should not be more than 2 in. wide, and this will govern the size of the blocking pieces in the mould. When the mould is ready it should be rubbed over with a rag dipped in paraffin or oil to prevent the concrete sticking to the wood. A suitable mixture of concrete would be 1 part of Portland cement, 2 parts sharp sand, and 4 parts ¾ in. shingle, mixed to a plastic consistency. A layer of concrete is placed in the bottom of the mould to a depth of 1 in. and firmly rammed. The "cage" of reinforcement is placed on this bottom layer, care being taken to ensure that it is spaced equally from the sides of the mould, so that there will be 1 in. of concrete between the steel and the mould. The remainder of the concrete is then placed, taking care to ram it thoroughly between and around the steel. When the mould is full the concrete is screeded off level with a straight-edge. After six days the post may be removed from the mould and laid on a level surface to complete the hardening process, and the mould cleaned, oiled, and reassembled for making the other end post. This should also be left in the mould for a week.

In the case of the centre post it will be necessary to form holes right through it, in order to take the inner ends of both sets of rails. Instead of the 3 in. blocking piece, it will therefore be necessary to make a blocking piece 6 in. long, which should be screwed to the bottom of the mould and supported vertically by screwing it to a strip of wood screwed to the top edges of the mould. In addition to the period of one week during which the posts are kept in the mould, they should be stored for a further three weeks before use, and during this period they must be kept moist, prevented from drying quickly, and protected from frost. If rapid-hardening cement is used the posts may be removed from the moulds in four days and used fourteen days after manufacture.

THE LAW AND PRACTICE IN FLOORING CONSTRUCTION

By WILLIAM G. SHIPWRIGHT, M.I.Struct.E.

THERE is perhaps no branch of the building industry where so much uncertainty and confusion exists in the law and regulations at the present moment as in fire-resisting flooring construction. It is difficult, and I think impossible, to get any definite order and ruling out of the existing chaos. It is true that committees meet, and one hears rumours of reform and new and definite regulations, but days grow into weeks, months and years without any practical advance to co-ordination.

Archaic laws have been re-enacted without reference to modern scientific discovery and improvement in methods of construction, and definition is so "undefined," if one may use the term, that we find materials as wide apart as the poles classified in the same category for identical purposes. Special suitability for a specific purpose has at the present time no clear status, and suitable and unsuitable alike are governed by such uncertain law and rule that it becomes of necessity a matter of the personal opinion of those called upon to see the law enforced. The view held by one official surveyor may be entirely different in really essential matters in flooring construction from those of his colleague in an adjoining district, and the view held by either may be quite reasonably argued as the correct interpretation.

The subject, which is of considerable importance to the architect, merits careful investigation, in the process of which it will be helpful, in the first place, to summarise in definite cases the application of the Building Acts and by-laws in operation to-day, collating them in a concise form and then considering controversial points as to whether the provision made is a good or a bad one in the light of recent investigation and discovery.

The last Act of Parliament dealing with building construction was made in 1930, and consolidated what may be termed the essentials of a number of previous Acts. This Act (the London Building Act, 1930) provides :—

In Section 80, Sub-Section 3—

> In every building exceeding twenty-five squares in area containing separate sets of chambers or offices or rooms tenanted or constructed or adapted to be tenanted by different persons, the floors and principal staircases shall be of fire-resisting materials.

In Section 81, Sub-Section 3—

> The Council may in any case in which they think fit so to do consent to any such building or part of a building as aforesaid being divided (wholly or in part) horizontally by floors to be constructed in such manner and of such materials and in all other respects as the Council may require or approve, and in such case such floors shall for the purposes of this section be deemed to be division walls.

In Section 82, Sub-Section 1—

> Buildings shall not without the consent of the Council be united unless they are wholly in one occupation, and when so united and considered as one building would be in conformity with this Act.

Section 5 of this Act defines fire-resisting material as :—

> Fire-resisting materials means any of the materials described or referred to in the First Schedule to this Act.

Schedule 1—Section 1 (6) defines concrete as :—

> Concrete composed of broken brick, tile, stone chippings, ballast, pumice, or coke breeze and lime cement, or calcined gypsum.

and (7)

> Any combination of concrete and steel or iron.

Section 2 (4) (a) describes such materials in the case of floors and roofs as :—

> brick tile, terra-cotta or concrete composed as described in sub-paragraph (6) of paragraph (1) of this schedule not less than 5 in. thick in combination with iron or steel.

This Act, in Section 236 and Schedule 6, rescinds the Building Acts and Amendment Acts of 1894, 1898, and 1905, and the parts of all other Acts essential to our purpose are repealed, but there are, however, regulations made prior to this 1930 Act which must be taken into consideration as affecting and modifying its provisions, because Section 236 (a) provides that :—

> Any by-law regulation order determination sanction approval consent notice condition licence or certificate made given imposed or issued under any enactment repealed by this Act shall in so far as it is operative at the commencement of this Act have effect as if it had been made given imposed or issued under this Act.

It is difficult to imagine a condition where by-laws made under an Act which is itself repealed can remain in force, but this seems to be clearly the intention, and, as such, surely a Pickwickian situation is created whereby the ghost of a defunct law may arise and incriminate the unfortunate builder. It is, to my mind, somewhat doubtful if these regulations have any real value in law, but it is necessary to refer to them and endeavour to draw some case which will invite recognised legal expression of opinion. They are regulations made under the London Building Act, 1905, Schedule 1, dated June 23, 1925, March 2, 1926, and January 22, 1929.

We will now endeavour to discover how these laws operate, and, as a first example, assume that Mr. A builds a three-story block of flats duly separated by party walls, and with brick wall enclosures, etc., all as provided in the 1930 Act. It is quite clear, I think, that he may construct his floors as Sketch 1 under this the last Act of Parliament relating to building generally. He has had regard to the following provisions of that Act : Section 5 of the Act defining fire-resisting material, Schedule 1 (6) (7) defining concrete, and Section 2 (4) defining what he must put into the floors. He has no by-law or regulation with which it is necessary to comply, and he may put the joists any distance apart he chooses, and provided the building is not actually a dangerous structure it appears that the district surveyor has no jurisdiction whatever.

Mr. B decides to build a similar block on an adjoining site, but he does not like the expense of concrete floors, so he decides to reduce the area below 25 squares and increases the height to five stories. He puts up his building with timber floors and complies with the Act in the manner indicated; moreover, he says 5 in. by 2 in. wood joists are of sufficient strength. Unless it is positively dangerous he complies, I think, with the law.

Mr. C proceeds on the next plot with another similar block, but he says : "I do not like the timber floors of Mr. B—I think they are most dangerous in that high building; nor do I like the breeze floors of Mr. A." He has before him, possibly, the book called "Coal Residues in Concrete," published by the Joint Committee of the following bodies :—Royal Institute of British Architects, Institution of Civil Engineers, Institution of Structural Engineers, Surveyors' Institution, Institution of Municipal and County Engineers, Department of Scientific and Industrial Research, District Surveyors' Association, Iron and Steel Institution, Fire Office Committee, Institute of Builders, and the Association of Floor Constructors. He thinks they should know something about the subject, and he may be personally aware of the very serious effect of sulphur compounds on steel, and decides that their conclusion :—

> "THE FOLLOWING COAL RESIDUES, NAMELY, ASHES, CINDERS, COKE BREEZE, PAN BREEZE, BREEZE CONTAINING ASHES OR CINDERS, AND CLINKER PASSING A ¼-IN. MESH, ARE UNSUITABLE MATERIALS FOR USE AS AGGREGATES FOR CONCRETE IN CONTACT WITH STEEL,"

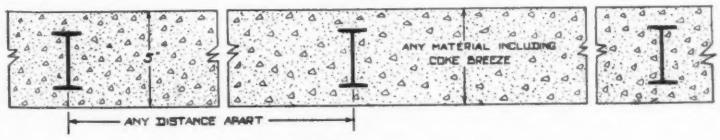
is well founded.

He says : "I will only put in the breeze for nailing my boards to. I will have a floor constructed as Sketch 2."

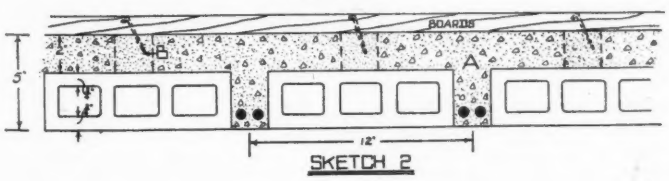
"A" is to be graded concrete composed of 3 parts shingle, 1½ sand, and 1 cement. "B" fine breeze concrete for nailing fillets.

The District Surveyor says this floor is not in accordance with the Act, as it is not 5 in. in solid thickness. Mr. C, however, turns up the Act and says it does not say "solid"; it merely says 5 in. thick; my floor is "a combination of concrete, steel and iron not less than 5 in. thick." He may add, "I want a good floor, but I could put in a floor as Sketch 3 if I chose."

[The remainder of this article will be given in our next issue.—ED.]



SKETCH 1



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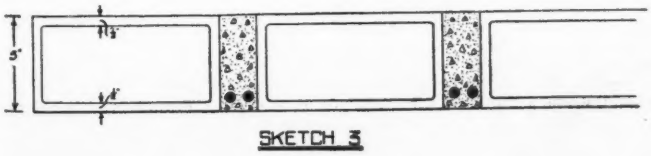


SKETCH 3

The Weigh House, Southampton.

The Weigh House, a 13th-century building discovered in French-street, Southampton, is to be preserved. It was among some properties which the Southampton Education Committee proposed to demolish to make additional playground for St. John's School. Its condition is dilapidated and the cost of repairs will be about £1,000 The building will be used as a hall for the use of the school.

INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

We do not undertake to reply to inquiries concerning proprietary materials.—ED.

QUESTIONS.

Distempering on Lime-wash.

SIR,—We have a problem to put before you for solution. We have to distemper, with any of the proprietary brands of washable distemper, walls that have been lime-whitened for a period of 60-70 years. The walls are in a bad condition, and the client does not wish to go to the expense of removing the plaster and lime-white if it can be avoided. Is there some preparation to kill the action of the lime, and so render the surface such that it would take distemper?

J. W. C.

Apprenticeship.

SIR,—I have had an application from a young man to take him as a bricklaying apprentice. As I am unfamiliar with the procedure to be followed, perhaps you could give me some information.

LONDON BUILDER.

[In this case the London Master Builders' Association, 34, Russell-square, W.C.1, as the local association of the National Federation of Building Trades' Employers, is the proper authority to whom application for particulars may be made.—ED.]

Weathered Oak.

SIR,—In a country house I am using oak for external doors, and wish to obtain the silver-grey effect common to old, weathered oak. How may this be done?

QUERCUS.

[While the best effect is gained by doing nothing and letting the weather do its own work, an immediate and quite pleasant result may be obtained by applying quicklime in the form of a whitewash. This is left on for a day or so, and is then brushed off and the door washed down.—ED.]

Ancient Lights.

SIR,—I am about to demolish some old premises with a prescriptive right to light over the adjacent premises. It is not intended to rebuild for about a year. Is it necessary to take any action, such as to affix notices or to establish the present area of lights, to preserve my right?

PROPERTY OWNER.

Lightning Conductor.

SIR,—What is the best earth connection for a lightning conductor? H. W.

[The best earth connection is a copper plate with a substantial soldered connection to the lightning tape. This plate should be in permanently moist soil, if possible, or else packed round with charcoal and coke, well wetted.—ED.]

Hot Water Supply: Possible Systems.

SIR,—We should be glad to hear of alternative systems, other than oil fuel or coal, for a supply of constant hot water for a block of flats. We should also be glad of information as to the efficiency and the cost of installation and running of such systems as compared to oil and coal. T. W. B.

Time and Progress Schedule.

SIR,—I have been commissioned to design a block of offices in a provincial town, and am considering its erection to a schedule of time, upon what has been called the "time and progress schedule" system. What I have heard regarding this schedule is interesting, but it occurs to me that such a system may tend to give too hurried building. Before I go farther with my plans, it would be of assistance if any of your readers who have used this system could kindly tell me what their experiences have been. C. H. C.

By-laws: A Contravention.

SIR,—I have recently completed a house in the area of a certain authority. Plans were submitted in the ordinary way before building commenced, and were approved. On completion, and learning that a habitation certificate was required, I applied to the surveyor for same. After the latter's inspection I was informed that the certificate could not be granted, as certain walls did not comply with the local Act, and, further, that rectification would be required. I have pointed out that construction was in accordance with the approved plans, but was informed that, notwithstanding this, such rectification can be called for. Can any of your readers tell me whether this is so? NORTH.

ANSWERS.

Hard Woods.

[ANSWERS TO "DESIGN," JANUARY 5.]

SIR,—Oak is better than walnut for general joinery work, owing to its greater strength and durability. Walnut is more of a cabinet wood and would be much too expensive for general work, where a first-class finished appearance is not necessary. Oak has properties that walnut has not, which makes it highly suitable for general building work, and would not be replaceable by walnut to any great extent. W. E. W.

SIR,—Walnut is a more expensive wood than mahogany, and may be taken as about half as much again. It is a harder wood, however, and is in many ways as hard and durable as oak. There are various Empire woods of similar figuring now upon the market. TIMBER.

Galvanising.

[ANSWER TO "GALVANISE," DECEMBER 29.]

SIR,—Obviously the trouble is that there is galvanic action set up between the ferrous metal in the clip and its zinc covering and the lead or compo pipe. A small piece of fibre placed between the clip and the pipe should be a cure. A.INST.P.

Stains.

[ANSWER TO "FINISH," DECEMBER 29.]

SIR,—A preparation called "Stainax" has been on the market for some years and can be obtained from most dealers in paints and the like. It is formed essentially of chemicals which form a stain and wax which gives the finish. A.INST.P.

Contract: Provisional Items.

[ANSWERS TO "E. B. WELLS," JANUARY 5.]

SIR,—It is not customary for a contractor to object to carry out work or supply materials comprised in "Provisional" amounts appearing in the bill of quantities; but he is within his rights in requiring first an order to carry these out, from the architect, since they are entirely under the control of the latter. The architect can, if he wishes, give the work out to a specialist or sub-contractor, or deal with it independently of the general contractor. But if the general contractor is called upon, and given an order to do the work, he must do it; it is part of his contract. LEX.

SIR,—In my opinion the contractor is correct in demanding an order to make use of provisional quantities. These are apparently inserted as a sort of "contingency in kind," and should be treated as a contingency sum to be administered. CONTRACT.

Cast Stone: Painting in Lettering.

[ANSWERS TO "S. B.," JANUARY 5.]

SIR,—The treatment which coats the surface with an impervious and inert skin such as shellac has the objection that the paint is not bound into the grain of the work, but merely lies upon the surface, with indifferent wearing qualities. It is better to use a paint the ingredients of which will resist the free lime in cement work, and the principal paint manufacturers make a paint of this nature. PAINTA.

[A reply to this query, recommending a paint for the purpose required, has been received from Mr. R. Hanson, of Carlisle. A copy of the letter has been forwarded to our correspondent.]

Heat Loss.

[ANSWER TO "INSUL," JANUARY 5.]

SIR,—Exact experimental data are not available, but experience shows that the old-fashioned roof, if properly beam-filled, forms an excellent and natural insulating cushion under a tile roof. Next in order of merit is the flat roof on timber, containing as it does a high proportion of air space. Solid concrete would encourage heat loss more than either of the other two, though there are forms of hollow tile flats which have a higher resistance. CONDUCT.

Extras Under a Building Contract.

[ANSWER TO "ARBITRATION," JANUARY 5.]

SIR,—The full evidence would need careful study to give a ruling upon these matters. There is no doubt that a contractor who carries out extra work without notice prior to the presentation of accounts may have denied the architect the opportunity of considering the necessity or otherwise of such work, and the occasion might arise where more economical methods, or alternative economies, would have been adopted had the architect received due notice at the proper time. On the other hand, the architect who passively sees, and is aware of, extra works being carried out has no right to withhold from the builder his just dues on the score that he has not given formal notice. ARCHITECT.

Doors and Weather.

[ANSWERS TO "WEST COUNTRY," JANUARY 5.]

SIR,—Doors of polished oak or mahogany or of any polished hardwood exposed to the weather should be given one or two coats of best carriage varnish after polishing.

J. W. STAMP.

SIR,—Neither french polish nor wax polish is an adequate protection for a hardwood door in an exposed position, and the outside surface should be heavily varnished with clear varnish, renewed possibly every other year. PROTECTION.

Contract Question.

[ANSWER TO "W.," JANUARY 5.]

SIR,—The contract is described as having no "saving clause": but this may act both ways. The contractor has thus bound himself to finish by a certain date, presumably with no relief for *force majeure*, etc. His position is thus not comfortable. I think, however, that he can rely on a ruling which observes the equity of allowing circumstances not disclosed at the date of tendering, to permit an extension of time. On the other hand, the local authority is an opponent with a long purse, and there are Appeal Courts, etc. A good rule is to avoid all such litigation, but to take as firm a line as possible up to that point. POLICY.

Ventilators: Exclusion of Mice.

[ANSWERS TO "E. W. G.," JANUARY 5.]

SIR,—The air bricks should be removed and their rear face wrapped with wire gauze and then built in again. Unfortunately, this reduces the ventilating area, and I agree with "E. W. G." that it is full time that an air brick is put on the market of a size sufficient for adequate ventilation and yet with apertures too small to admit vermin. VENTS.

SIR,—Mice getting through ground ventilators are always troublesome. The only satisfactory remedy is to use standard ventilators, and to cover the openings with wire gauze, which will not greatly interfere with the ventilation. The only other remedy would be to use ventilators with air spaces too small to admit mice. Both of these plans interfere somewhat with the ventilation, but this can be compensated for by cleanliness and ample size. W. E. W.

THE BUILDING TRADE

MATERIALS AND CONSTRUCTION IN THE LIGHT OF MODERN RESEARCH—I

By B. PRICE DAVIES, F.S.I., L.R.I.B.A., M.T.P.I.

Limes.

THE issue of a British Standard Specification (B.S.S.) is imminent for limes, and a Building Research Laboratory Publication (B.R.L.P.) has been issued under the title of "Limes and Lime Mortars" during recent years. This publication deals with Pozzolanas and Lime-washing as well.

Limes are divided into the three classes, "A," "B," and "C." In class A we have the limes largely suitable for plastering, termed white lime, chalk lime or quick lime, and these are obtained from the burning of limestone or chalk. Grey chalk lime is included in this class.

Class B includes the grey stone limes which can be regarded as an intermediate grade between Classes A and C, and suitable in a limited way for the purposes of either of these two classes.

Class C limes are those suitable for walling mortars and are "hydraulic" limes. Such name has been given them because of their property of being able to set in water to some degree. What is more important is that they do not need air to assist in their setting as in the case of class A limes. In this way the mortars harden in wall joints where the air does not penetrate.

Uniformity of a lime product is a great essential, and this can only be obtained from a uniform grade of limestone burnt in a uniform and proper manner. Hand-picking of the stone in the quarry is often a primary essential for a good lime. The suggested classification for British Standard Specification is based upon the following extract :—

	Fat	Lean	Hydraulic		
			Feebly	Moderately	Eminently
$CaO+MgO$ ...	$> 95\%$	$< 95\% > 85\%$	$> 60\%$	$> 60\%$	$> 60\%$
$SiO_2+Al_2O_3$			$< 15\%$	$> 15\% < 25\%$	$> 25\% < 35\%$
Tensile Tests with 1-3 mortar ...		...	...	> 75 lbs.	3 days moist air 25 days water

Lias limes come in the category of "eminently hydraulic" limes.

With class A limes the increase in volume upon slaking (termed the "volume yield") can reach to three times the original bulk in lump form. Such increase of volume is a good indication of the quality of a lime; the fattest limes not only increase to this extent, but their covering power when used in plastering mortars has been found by the writer to be much greater than that of lean limes, even when compared on the basis of volumes of lime putty.

Limes with a volume yield of less than double should be classed as "lean" and those above as "rich."

Class A limes should be fresh when slaked into lime putty, for while becoming air-slaked, carbon-dioxide is absorbed from the air, and thus depreciates its value at the later stage of use in plastering mortar.

The impurities of all limes should not exceed 5 per cent., while grades of quality can be "selected" and "run of kiln." Selected lime is what its name implies, and should be neither underburnt nor overburnt, and free of impurities. With the product of a suitable limestone burnt in a good lime-kiln, the "run of kiln" can be to the standard of selected lime.

The writer has seen class A lime from a certain lime-kiln prove to be to this standard over a period of many years and with considerably less waste than the 3 per cent. of the American standard of allowance.

"Calcium" limes are those which contain 85 per cent. or over of calcium oxide, while "magnesium" limes contain 10 per cent. to 20 per cent. of magnesium oxide.

The grinding of class A limes and the product sold in bag form as "hydrated lime" has increased during recent years. It is claimed to be stronger, and also that if run into putty a day before use, this is sufficient. This claim is probably justified for lime which is properly burnt and free from impurities. It is not, however, justified for lime which may contain underburnt or overburnt stones. The writer has experienced very fine pitting of wall surfaces as the result of the use of hydrated lime, the pitting taking place as long as twelve months after use. The grinding will not convert a bad lime into a good one, although it makes the pitting much smaller.

Class A limes in lump form should be "run" at least a month before use, and it is well to remember that the ancient Greeks and Romans had a term of three years.

Hydrated lime should be ground so that the residues on sieves of 30 and 200 mesh should not exceed 0.5 and 15 per cent. respectively. The maximum carbon-dioxide permissible on test is 5 per cent., for this denotes the presence of unburnt lime which would cause pitting or "popping" in plastering.

Class C lime is also sold as "ground lime" in bags, and it will burst the bags if not used soon after purchase. With experience of the use of both class A and class C limes in ground form, the writer is of the opinion that both limes are more effectual in their purpose and will go farther in yield than limes in lump form.

Cements.

In this classification we will first deal with ordinary Portland cement, rapid-hardening cement, quick-setting cement and white cement.

The B.S.S. for Portland cement was revised during 1931, and is chiefly for ordinary Portland cement. A special B.S.S. will probably make its appearance for quick-setting or aluminous cement at an early date.

The B.S.S. of 1931 gives the initial setting time for Portland cement as not less than 30 minutes, and final set 10 hours, as compared with 5 minutes and 30 minutes respectively for quick-setting cement. It sets up standards for fineness, chemical composition, tensile strength for a 1 : 3 mortar, setting time and soundness. The sand for tests is standard Leighton Buzzard sand.

A welcome note is the stipulation that from January 1, 1933, the standard weight of cement in bags will be 112 lb. (or 1 cwt.) per bag. Weights in wooden casks and steel drums are to be 375 lb. in each case. These weights are net. The basis of weight per cubic foot of cement is now generally accepted as 90 lb., and this for all cements.

For years it has been considered that the fineness of cement is one of its chief virtues, and that the finer the cement the stronger it is. Recently, however, it has been stated that this extreme fineness has made for greater shrinkage, and that cement mortars and concretes are not so impermeable as the cement of earlier days. A claim for the superiority of an aluminous cement is that it is not so finely ground as modern high class Portland cements, and that it is more impervious to the action of water in consequence. The mixing of the two cements is not recommended. Their chemical constituents differ greatly, and while Portland cement liberates free lime in setting, aluminous cement liberates alumina. This is a difference of great note, for whereas the free lime is often an active source of trouble, the alumina is practically inert.

Rapid-hardening cement is a Portland cement which has the property of hardening more rapidly than ordinary cement. It has earlier strengths than the latter, but with ageing to a year or more there is not much to choose between them.

White cement is a form of Portland cement which has become popular in use during recent years.

Storage.

It is claimed that aluminous cement does not deteriorate so much with storage as Portland cement, but tests reveal that undue stress has been laid in the past upon the age and storage of Portland cement. Storage does affect the time of setting and earlier strengths adversely, but the results of ultimate strengths reveal that storage is not a great factor as regards strength; the free lime diminishes with storage, and this to the advantage of the cement.

The "Concrete Year Book" states that if cement absorbs from 1 per cent. to 2 per cent. of moisture, there is no appreciable effect, but that with 5 per cent. absorption it is ruined.

Portland blast-furnace cement has a B.S.S. of its own (No. 146-1928). This cement has special merit in some cases, and particularly in that of fireproof construction and in resistance to the action of sea water.

The use of cement in a hot state is found to be unimportant.

Plasters.

A great deal of progress has been made in the development of sulphate plasters during recent years. Keene's cement and plaster of Paris are well known, but plasters with a retarded action of setting (as compared with plaster of Paris) are becoming increasingly popular. One of their chief merits is that the plaster work can be completed in the sequence of coats in the matter of a few days as compared with weeks in the case of lime mortars. They are suitable for internal work only, and a B.S.S. should prove of great service for this kind of material. America has such a standard.

It is usual to use Keene's cement for hard-wearing surfaces, such as quoins and dados. It is laid over Portland cement rendering, and makes an excellent surface.

Revisiting recently a building in the construction of which the writer was interested about twenty years ago, he found that the cement rendering for the quoins internally had shrunk and that fine cracks appeared across the quoins every foot or so in height. This is one of the objections to cement renderings, and sulphate plaster coarse renderings and lime mortars are not so liable to this fine cracking effect.

A trouble with hard-surfaced sulphate plasters and cement surfaces when used internally is that they are often prone to condensation; ordinary lime plastering is, again, less liable to this defect.

The writer has recently rendered walls with a lean cement mortar and finished them off with a mixture of lime putty and patent sulphate plaster. They appear just like alabaster, and there is no condensation; but the surface skim is rather soft, as compared with Keene's cement.

Church Schools, Soho.

In connection with the paragraph which appeared in our issue of December 29, 1933, stating that improvements and extensions were to be carried out at St. Patrick's Church Schools, Soho-square, we are informed that the work has been completed. The architect was Mr. T. H. B. Scott, F.R.I.B.A.; and the builder was Mr. William Figg.

THE YEAR AHEAD

THE CASE FOR PRE-PLANNED BUILDING

THE year 1934, we may guardedly express the belief, will see an increase in the volume of large building works carried out. Leaving on one side the controversial question of housing, there are indications that general contracting is likely to have a better year than in 1933. Official figures show that the average of plans passed for general building (excepting housing) for the first 11 months of 1933 are over 8 per cent. better than the average over 1932.

The weekly lists of "New Public Works" given in this journal show that a gratifying number of schemes for schools, foreshore works, swimming pools, municipal buildings, town halls and hospitals are proposed to go forward. Manchester is to go forward with its town hall extension and municipal buildings, estimated to cost £675,000; Bristol City Council is recommended to commence the first section of a mental hospital to cost £187,000, being part of a larger scheme estimated at £506,000. Tenders are at the present time being invited for the erection of a 875-bed mental hospital at Runwell, Essex, for the East Ham and Southend Joint Visiting Committee. The cost is expected to be about £500,000. A contract has just been placed for the erection of Leeds University Library, to cost about £100,000. London boroughs proposing new municipal buildings are Woolwich (on which work is shortly to start); Hackney and Stoke Newington (for which architectural competitions are in process of being decided); St. Pancras; Beddington and Wallington; and Hornsey. Among provincial municipal buildings proposed or about to be erected are those at Coalville, Exeter, Southampton, Andover, Ryde, Trowbridge (for the Wilts C.C.), Birkenhead and Chichester (for the West Sussex C.C.).

This list could be extended very considerably, but enough has been quoted to substantiate a forecast of future activity, for private enterprise may justifiably be expected to follow the official lead.

The Need for Planning.

In the execution of these works there is a strong case to be made out for the pre-planning of building construction before work commences on the site. Such an instrument is already available in the form of the "time and progress schedule." An extension of this instrument—which is used by a number of leading London and provincial firms—would be all to the good of the building trade and industry generally. Briefly, the schedule demands a co-operation between building client, architect, engineer and builder to the end that the scheme be agreed upon and adhered to, so that the architect may hand complete working drawings and ¾-in. scale details of the building to the contractor at the time of estimating. This permits the preparation of a correlated chart showing the estimated time required for each operation, the chart being prepared in consultation with the sub-contractors for P.C. items. The need for complete agreement between client and architect cannot be too firmly emphasised. The "Information Book of Sir John Burnet, Tait and Lorne," stresses this point as follows: "It is essential that the client and our office make up their minds and maintain their decisions. When the client allows his mind to fluctuate from one idea to another and does not give the contractor information and decisions when required, or, having given them, maintains them, it is useless for him to complain if the contractor takes a long time to build and is expensive. In other words, if one chooses to have luxury methods one must not complain of their cost." The principal agents in the effort towards better organisation are the client and architect, and of these two the onus is on the architect, the average building-owner being unversed in building methods.

That there is room for a considerable extension of more exact pre-planning of building will not be denied, for a building completed to time saves money both in construction wages, and in that the owner is able to take possession to time and so cancel his temporary accommodation. If the building, for example, is for letting, then a definite opening date assists in arranging for lettings.

It is of interest to note that during 1933 H.M. Office of Works have on several occasions invited tenders from contractors for the erection of Government buildings to be executed on the "Time and Progress Schedule" system. This action upon the part of the largest employers of building in England is significant. Upon inquiry at the Office of Works the following opinion was expressed: "The Office of Works, following upon the report of the Building Industry Council of Review, decided at the beginning of last year to give a trial to the 'time and progress schedule' upon a number of larger buildings proposed to be erected. Tenders were invited from contractors experienced in such work, and the Department, in issuing schedules, stipulated a maximum time allowance for the completion of the building based on ordinary conditions. Six buildings in all have been, or are about to be, commenced upon these lines, and in every case the contractors have been able to promise completion well within the time fixed. In the case of one structure, which was estimated by us at two years, eighteen months was the time asked for by the successful contractor. None of these works is yet completed, but the evidence to date is that the schedule is a useful new tool. We do not expect miracles to be performed, but there are definite signs that its use has stimulated an increased degree of forethought in planning the construction scheme, which has resulted in the elimination of many of the petty hindrances and delays usually associated with a large job. The prices and number of tenderers have been normal and, taking into consideration the time likely to be saved, we are, in so far as we have gone, fully satisfied with the experiment."

COMPARISON OF PRICES OF BUILDING MATERIALS

On January 1, 1933, with Current Prices.

	January 1, 1933.			January 1, 1934.		
Bricks—						
Best Stocks	4	3	6	4	3	6
Flettons	2	11	3	2	11	3
Glazed	21	0	0	21	0	0
Thames Ballast	0	6	6	0	7	3
Pit Sand	0	7	0	0	7	9
¾-in. Shingle	0	6	6	0	7	3
¾-in Broken Brick	0	10	6	0	11	3
Portland Cement	2	4	9	2	4	9
Ground Blue Lias Lime	1	17	6	1	17	6
Bath Stone	0	2	10	0	2	10
Portland Stone	0	4	4½	0	4	4½
Building Timber—						
4-in. × 11-in.	23	10	0	23	10	0
3-in. × 11-in.	19	10	0	19	10	0
3-in. × 9-in.	19	10	0	19	10	0
3-in. × 7-in.	18	0	0	18	10	0
3-in. × 4-in.	17	10	0	18	0	0
Slates (per 1,000)—						
24-in. × 12-in.	29	15	0	29	15	0
20-in. × 10-in.	19	7	6	19	7	6
16-in. × 10-in.	13	10	0	13	10	0
Tiles—						
Machine-made	4	7	0	4	7	0
Hand-made	5	0	0	5	0	0
R.S. Joists	11	0	0	11	0	0
Iron—						
Common bars	11	0	0	11	0	0
Mild steel bars	10	10	0	10	10	0
Sheet Lead	20	0	0	20	0	0
Raw Linseed Oil	0	2	2	0	2	2
Turpentine	0	5	6	0	4	1
Ground English White Lead	45	0	0	45	0	0
White Lead Paint	63	0	0	63	0	0
Red Lead	34	0	0	32	0	0
Glass—						
15-oz. sheet	0	0	2⅜	0	0	2⅜
21-oz. ,,	0	0	3⅛	0	0	3⅛
26-oz. ,,	0	0	4⅛	0	0	4⅛

PLUMBING TRADES APPRENTICESHIP

THE annual function, arranged by the Plumbing Trades' Central Apprenticeship Council for London, at which present and past apprentices indentured under the scheme met members of the Council and master and operative plumbers for social intercourse, was held on December 21 at the Royal Sanitary Institute, under the presidency of Mr. W. D. Caroe, F.S.A., F.R.I.B.A., the chairman of the Council. At the outset the apprentices with their elders enjoyed a tour of the Parkes' Museum, and then sat down to a meal, subsequently adjourning to the library for the more formal proceedings.

Opening the meeting, Mr. W. D. Caroe spoke on the history of plumbing, recounting happenings at the introduction of what might be called "Modern Sanitation in 1886." He stated that there really was nothing new since then, although there were great improvements in fittings and methods, as instanced by the model of the "one-pipe" system they had inspected in the Museum. Mr. Caroe then called upon Mr. W. E. Fretwell to deliver a lecture on "Hot Water Supplies," at the close of which a number of questions were answered by Mr. Fretwell, amplified by sketches and calculations on the blackboard.

Mr. Regd. H. Hellyer, M.R.San.I., in proposing a vote of thanks to Mr. Fretwell, impressed on the apprentices their responsibilities both to themselves and to their employers. Mr. Chas. M. Smeaton, F.R.San.I., seconded this vote of thanks. Mr. Fretwell suitably responded.

Mr. Victor T. Sulston then proposed a vote of thanks to the chairman, Mr. W. D. Caroe, and said that not only the apprentices but employers and operatives must keep themselves fully alive to the changes taking place in the plumbing trade; he was sure that in promoting the interests of the apprentices they were endeavouring to make the trade better in every respect. Apprenticeship was the legitimate entry into the trade. Mr. Caroe had used his best endeavours to make the indenture of the Council the best in the country. He hoped that apprentices would live up to the traditions of the craft and follow in the steps of the oldest members who had set them such a good example. Mr. R. H. Meadows seconded the vote of thanks, which was carried unanimously.

During the evening the Chairman handed the signed indentures to the following apprentices:—Mr. H. Redman, whose indentures bore an endorsement to the effect that he had gained the premier position in the City and Guilds of London Institute's Final Examination in Plumbers' Work, and had been awarded the silver medal. Messrs. A. Blinco, J. W. Smith and R. Jackson also received their indentures; Messrs. J. H. White and A. T. Ashley were unable to be present to receive their indentures.

Both Mr. W. H. Stitson, M.R.S.I., and Mr. John Hamlin, the hard-working secretary of the Council, must have been gratified that as a result of their energies such a good number of apprentices and friends attended the meeting.

The Property Market, 1933.

In an annual report of the property market during 1933, Messrs. Chamberlain and Willows state that as regards industrial property, "the year commenced on a bright note in the City and inner suburbs, but quietened down considerably towards the end. Applications for the larger type of multi-story building have definitely dropped, but the market for smaller properties and floors is still brisk. Rents show an appreciable drop in most districts, particularly the West End. A real difficulty to the expansion of industry is the dearth of scheduled industrial sites within ten miles of the city, but with the recent opening of several new estates at Morden, Croydon and on the Great West-road, the position promises to be easier in 1934. The improvement in factory design is a notable feature of the year."

COMPOSITION OF CONCRETE

A PAPER on "The Composition, Mixing, Methods of Application of Concrete and Reinforced Concrete as Used in the Yards and the Control of Same," by Mr. T. R. Grigson, O.B.E., M.Inst.C.E., was read at a Concrete Congress some time ago.

The proportions in which the various components of concrete should be mixed together had, said the lecturer, long been a more or less haphazard process, always considered unsatisfactory, but endured for want of better methods. The arbitrary specifying of proportions was not only wasteful but insufficient, and to meet their effects the allowable stresses on concrete had been fixed so low that actual failure or disintegration could only result through neglecting ordinary precautions. Owing to the attention always given to "cement" instead of to "concrete," the former had reached a high state of perfection while the latter had improved hardly at all, and only by the improvement of cement.

It was only during recent years that any attempt had been made to put this subject on a scientific basis due to the fact that the parts played by the various constituents had never been rightly understood. The results of experiments covering several years, and made by independent investigators, had established the relative importance of the cement aggregates and water, especially the last. With this theoretical knowledge, and the practical means of applying it, there was no longer any excuse for adhering to the old and uncertain methods of manufacture. It might be of service at this stage, said the speaker, to review some of the methods most commonly adopted:—

Proportioning by Arbitrary Selection of Volumes.—This was a customary practice, and consisted in stating the proportions of cement and fine and coarse aggregate with little or no reference to the amount of water that was to be used. The results obtained had been fairly satisfactory only because the unit stresses used had been so low that there was a good margin of safety, even with the poorest concrete. The chief defects in connection with this method could only be briefly summarised as follows:—

1. Arbitrary proportions do not take into account the voids, grading, or sizes of the aggregate. By specifying a concrete to be mixed in the proportion of 1 : 2 : 4, in which no account is taken of the above properties, it is possible to produce a mixture in which the proportions may be any one of an indefinite number of combinations, with a corresponding variation in strength.

2. Specified proportions are based on dry compact aggregate, whilst, in practice, they will always be measured loose and may contain considerable moisture, especially the sand.

3. Sand will bulk or increase its volume as much as 30 per cent. with a moisture content of only 5 per cent. by weight, so that a gauge box of 10 cu. ft. capacity when filled with damp sand would actually only contain about 7 cu. ft. of dry material.

Coarse aggregate will also bulk when wet, but to a much smaller amount.

Proportioning by Void Measurement.—This method consisted in measuring the voids in the stone and sand and so adjusting the mixture that the volume of sand was equivalent to the volume of voids in the stone, and the volume of cement equal to, or slightly in excess of, the total amount of voids in the sand. In actual practice this procedure gave no better results than that of proportioning by arbitrary selection, and it had been proved by extensive tests that concrete made in such theoretical proportions was always weaker than a 1 : 2 : 4 mix, and generally stronger than a 1 : 3 : 6 concrete. The following were some of the chief points of weakness in this system:—

1. Considerable variation may occur in the degree of compactness obtained in actual work due to the method of handling the various materials. Opinion differs as to whether the stone should be loose or shaken when this test is being undertaken.

2. The addition of water to the sand, when determining the amount of voids, results in a degree of compactness that is not obtained under ordinary working conditions. It is evident, therefore, that the test is valueless unless the conditions are identical.

3. Many of the voids are so small that a large number of the particles of sand will not fit into them, but will fit between the stone and increase the bulk; on account of this increase in bulk, even with thorough mixing, more sand is required than the actual ascertained volume of voids in the coarse material.

Proportioning by Mechanical Analysis.—This method consisted of passing the aggregates, both coarse and fine, through successive sizes of standard mesh sieves, noting the quantity passed and retained on each, and plotting these as a curve. By this procedure more or less regular curves would be obtained for the sand and stone, and their variation from a predetermined curve for each might be noted. In this way the deficiencies of one material could be balanced against the advantages of another, and by combining the two, as determined from this curve, a decision might be reached as to the proper portions of the several materials. In this way the voids received indirect attention due to careful grading of the aggregates rather than by the establishment of new conditions which were likely to arise by the introduction of water.

Proportioning by the Water-Cement Ratio Theory.

This theory, first introduced by Prof. Duff Abrams in 1918 in "Design of Concrete Mixtures," published by the Structural Research Laboratory, stated that for given materials and conditions of manipulation the strength of concrete depended solely on the ratio of the volume of mixing water to the volume of cement so long as a workable consistency was obtained. Another way of stating this was that so long as the water bore a constant ratio to the cement, the strength of the concrete at a given age was fixed regardless of the quantity of aggregate added, so long as the mixture was of a workable consistency and the materials sound, clean and durable.

By consistency was meant the degree of workability usually defined by more or less vague terms such as "dry," "wet," "quaking," "plastic," "sloppy," etc., and now replaced by specifying that the concrete must have a certain "slump," the amount of which would vary with the purpose for which the concrete was to be used. The slump was the amount of settlement in "inches" obtained after filling with concrete a standard metal cone form of 4 in. top diameter, 8 in. bottom diameter and 12 in. high, and then removing the form. A concrete giving a slump of ½ in. to 1 in. would contain more water than was required for maximum strength and would be too stiff to work for many cases in practice. An addition of 5 per cent. more water would give a slump of about 2½ in., but would reduce the strength with ordinary cement concrete to about 65 per cent. of the maximum obtainable. The smallest slump that would give a consistency suitable for the work in hand should be used; the following were a few of the recommended amounts for different types of work:—

Mass concrete 2 in. slump.
Concrete roads 2 in. slump.
Reinforced concrete floors and other sections used in buildings, 3 in. to 4 in. slump.
Heavy reinforced concrete sections depending upon amount of reinforcement, 2 in. to 6 in. slump.

The following were a few of the most important conclusions which were arrived at after some 50,000 tests had been carried out:

1.—The sieve analysis furnishes the only correct basis for proportioning aggregates in concrete mixer.

2.—With given concrete materials and conditions of test the quantity of mixing water used determines the strength of the concrete so long as the mix is of a workable consistency.

3.—Fine and coarse aggregates of widely different sizes and grading can be combined in such a manner as to produce similar results in concrete.

4.—The aggregate grading which produces the strongest concrete is not that giving the maximum density (lowest voids). A grading coarser than that giving maximum density is necessary for highest concrete strength.

Concrete Proportions.

Generally the correct proportions of the ingredients in a concrete mix would closely approximate to the ratio of 2 parts of stone to 1 part of sand and from 1 to 2 parts sand to 1 part cement. There were, however, engineers who advocated for reinforced concrete work a 1 to 1 ratio of cement to sand instead of the usual 1 :2 making a 1 :1 :2 mix. It was claimed that by adopting these proportions instead of the usual 1 :2 :4 and assuming correspondingly higher working stresses a saving in cost might be effected by reduction in the weight of the structure, quantity of aggregate and size of moulds. A further advantage was to be obtained in regard to the water content, for whereas in a 1 :2 :4 mix 10 per cent. too much water decreased the strength of the concrete by 20 per cent., a similar increase in the case of a 1 :1 :2 mix only decreased the strength by 10 per cent. It was claimed, however, that in the richer mix there was less temptation to use an excess of water, for the reason that the increase in the cement content gave all the workability that was required, resulting in greater uniformity of the concrete and better adhesion to the reinforcement. Another mix that had been found to give excellent results, particularly in regard to roadwork, had been adopted by Mr. G. H. Whitaker, M.Inst.C.E., City Engineer of Cardiff. It was his endeavour to achieve a stronger wearing surface than that normally obtained with a 1 :1½ :3 mix, in which the coarse aggregate was composed of ¾ in. to ⅜ in. granite chippings. To obtain this, granite broken to 2 in. gauge was substituted for the chippings and supplemented with ¼ in. granite chippings and sand, the mix being as follows:—

3 parts 2 in. granite.
1½ parts ¼ in. granite.
2 parts sand.
1 part cement.

This made a ratio of one part of cement to 5½ parts of aggregate, of which 4½ parts were granite. The concrete obtained was particularly dense and provided a hard and durable wearing surface.

The ratio of cement and sand was generally accepted as being in the proportion of 1 to 2, with little or no attention paid to the ratio of the coarse to the finer particles. Some recent experiments carried out in London showed the following to give higher results than that obtained with an ordinary first-class sand:—

Three parts of sand that had passed ¼-in. sieve and retained on 1-16-in.
Two parts sand that had passed a No. 50 sieve.

These mixed together and used as the sand content in an ordinary first-class ballast concrete 1:2:4 mix gave an average crushing strength of 3,400 lb. per sq. in. at 24 hours with rapid-hardening cement, as against 2,850 lb. per sq. in. for a concrete in which a first-class sand of ordinary grading was used.

Curing Concrete.

Five of the principal requirements for a sound, durable concrete might be briefly summarised as follows:—

(1) Durable and impervious aggregates.
(2) High quality cement.
(3) Densest possible mix.
(4) Thorough mixing and placing.
(5) Adequate protection and curing.

Much had already been said on various requirements, and a few words might not be out of place in regard to the fifth requirement—adequate protection and curing.

The present knowledge of the behaviour of Portland cement concrete, whilst setting and hardening, indicated that under favourable curing conditions a maximum amount of cement would be hydrated, thus giving the maximum strength to the concrete. In addition to this, the concrete would be subject to a minimum amount of volume change during its period of low strength, and, therefore, cracking would be considerably reduced, and other desirable properties such as watertightness and bond strength materially improved.

Practically all concrete as mixed and placed contained an excess of water over that required for hydration, and the problem of curing was really that of the prevention of the loss of water through evaporation caused by heat, cold, drying winds, etc.

The proportion of water actually entering into chemical combination with the cement might vary from as little as 5 per cent. to as much as 25 per cent. to 30 per cent. by weight of the water content, depending upon the age and curing conditions. The most favourable period for curing was during the first three or four days after the concrete had been placed and finished, but the full value of this operation could only be obtained by employing a suitable medium which would provide the necessary moist conditions over a still longer period. The most usual methods of curing were by the application of water either by sprinkling or ponding or by the use of some suitable covering such as earth, sand, canvas, etc., which could be kept moist.

NEW PUBLIC WORKS

Birmingham.

Provisional arrangements have been made between the Birmingham Corporation and local builders for the erection of houses to be let to persons of the working classes. In October the City Council approved proposals in pursuance of which the Corporation agreed to join with building societies in the guarantee to builders under the terms of the Housing Act of 1933, relating in the first instance to the building of 2,000 houses on certain conditions. The conditions imposed by the Minister in connection with the Corporation scheme restricted the maximum all-in cost of the houses to £380.

Blackpool.

Alderman Francis Lumb, F.R.I.B.A., has submitted proposals to Blackpool General Purposes Committee for the erection of new town hall on a site to be decided upon in Stanley Park, and also as to competitive designs being invited for the development of land owned by the corporation between Talbot-square and Church-street. A special sub-committee is to be appointed to obtain the best advice available as to where the proposed new town hall shall be erected.

Coventry.

The Borough Engineer has been instructed to prepare plans for a bathing place on a new river cut across land at Bird's-corner.

Darlington.

A draft plan showing a suggested lay-out for public buildings and their surroundings has been submitted by the Darlington borough surveyor, Mr. F. Minors, to the sub-committee appointed to consider the better development of the centre of Darlington. The surveyor is to ascertain from the chief officials of the Corporation what they need in office accommodation in the event of new municipal buildings being built.

Ellesmere Port.

Cheshire C.C. invites tenders (returnable by February 5) for the erection of new modern schools for 800 pupils at Ellesmere Port (Grange Farm Estate). Plans are by Mr. F. Anstead Browne, F.R.I.B.A., County Architect, The Castle, Chester.

Glamorgan.

Mr. W. James Nash, the county architect, in his estimates states that in considering the ensuing year the Glamorgan P.A.C. would probably want to bear in mind the expenditure on new buildings which had been under consideration as follows: Llwynypia Hospital, new operating theatre, £1,000; Bridgend Institution, new operating theatre and X-ray room, £2,000; Bridgend Infirmary, proposed new nurses' hostel, £15,000.

Hereford.

Hereford City Council has sanctioned a scheme put forward by the Roads Committee for the utilisation of the site of the old gaol in Commercial-street as an omnibus station.

Hull.

A start will be made during January on the construction of a central 'bus station and garage to accommodate 300 'buses, with workshops and offices. The scheme will cost £100,000. A new hotel in Ferensway is also to be built.

Irish Free State.

In a statement, the Free State Minister for Local Government and Public Health announced that, apart from housing schemes already under way—which will provide 22,010 houses—there are definite proposals for the building of 7,696 houses in urban and 7,941 in rural areas. 3,000 of these will be erected on a site in Crumlin. Loans amounting to £2,900,000 are to be sanctioned by the end of March.

Kennington.

The Duchy of Cornwall has sold to the London County Council sites of 14½ acres near the Oval. The whole area is to be cleared by the L.C.C. and used as a "descant" station where tenants displaced from congested areas can be housed while rebuilding of those areas proceeds.

Kent.

Kent C.C. invite tenders for the erection of a matron's house, porter's lodge, and receiving ward at the Public Assistance Institution, Dover. Bills of quantities and forms of tender can be obtained on application, by January 27, to the architect, Mr. W. Robinson, F.R.I.B.A., Springfield, Maidstone.

Kent.

Kent C.C. invites applications to tender (to be received by the architect, Mr. W. H. Robinson, F.R.I.B.A., not later than January 24) for (*a*) all building work in connection with the erection of a laundry, boiler-house and adaptations, and (*b*) all engineering services, at Pembury Hospital, Pembury.

Leicester.

Leicester City Council has accepted a tender for the erection of 112 houses at a cost of £31,214 to rehouse persons displaced in the Redcross-street slum-clearance area. The Council has approved extensions to the Leicester Frith Home for Mental Deficients at a cost of £11,793, and the expenditure of £10,630 on extensions to the Public Assistance Institution.

Manchester.

Manchester City Council is to sanction the expenditure of £14,900 upon various hospital improvements. A sum of £2,000 is asked for to improve the accommodation for nurses at Withington.

Mayo.

Mr. C. McLaughlin, Letterkenny (Donegal), has been appointed as architect in connection with the reconstruction of the Mayo County Home, Castlebar.

Mile End.

The Board of Governors of the People's Palace, Mile End-road, have instructed their Finance and General Purposes Committee to submit a scheme for a large hall with seating accommodation for 2,000, equipped for music, dancing, and cinema shows. A smaller hall to hold 500 is proposed, also a restaurant, swimimng-bath, squash-rackets courts, etc. A cinema organ is proposed for the large hall. The question of the appointment of an architect is now being considered.

Morecambe.

A contract for the demolition of the remains of the Central Pier Pavilion has been placed with Messrs. T. Wards, of Sheffield. The Pier Company is considering plans and specifications from various construction companies for the erection of the proposed new £25,000 pier.

Newcastle-upon-Tyne.

A £198,000 scheme for the rebuilding of the Town Hall is to be submitted for the approval of the City Council. The proposals include a building five stories high with a basement at one end, and four stories without a basement at the other end. The building will accommodate the town clerk's department, city treasurer, city engineer, medical officer of health, estate and housing department, and the Lord Mayor's secretary. No definite appointment has been made regarding the architects.

Petersfield.

A scheme is on hand to provide Petersfield with a public hall in Heath-road. Plans for the building will be prepared by Hon. J. Seely & Paget, F.R.I.B.A., 41, Cloth Fair, London, E.C.1.

Salford.

The T.C. is contemplating the expenditure of £1,500,000 in 1934 upon various building schemes. Rehousing will account for £116.000 and the Hope Hospital for £28,000. There are also proposals to spend £60,000 on Lower Broughton school and £17,000 on new offices for the Public Assistance Committee. Another school at Lancaster-road, to cost £2,500, is also proposed. Among the schemes already approved by the Council with respect to the application for borrowing powers are: Cromwell Bridge improvements, costing £9.600; the Regent-road widening, £26,000; and the Oakwood Valley scheme, £12,000.

Wandsworth.

At a public meeting, the Wandsworth Borough Council has been empowered to proceed with a Parliamentary Bill to enable the Council to erect municipal buildings and other buildings for a civic centre, and to acquire land for the purpose. The Mayor (Ald. Lieut.-Col. G. F. Doland), who presided, said the Council for some years had been hampered by the various offices and buildings being distributed in different parts of the borough. As to the Council chamber, its accommodation was meagre in extent and inadequate in character. Having regard to the increase in their work and to the new duties which were foreshadowed, the Council felt it was in the public interest with a view to economy of administration and staff that the departments should be centralised. The new civic centre will be in High-street, Wandsworth, between York-road and Fairfield-street. The total estimated cost of the scheme is £368,000.

Worthing.

The T.C. has turned down the proposal (referred to in our issue for January 5) to spend £61,000 upon an assembly hall to complete the new municipal buildings. £40.000 of the estimated sum is the gift of Alderman J. G. Denton, and it is proposed that a hall be built at a cost not exceeding this figure. The matter has been referred back to the requisite committee. The architect is Mr. C. Cowles-Voysey, F.R.I.B.A., and a tender of Messrs. Trollope and Colls, Dorking, had been recommended for acceptance.

NEW BUILDINGS IN LONDON

ACTON. — ADDITIONS. — Alterations and additions are being carried out at the premises of the National United Laundries Corporation, Ltd., in Stanley-road. Mr. G. P. Pratt, 174, High-street, W.3, is the architect, and Messrs. R. Hewitt, Ltd., Clevelandworks, Cleveland-road, Acton Green, W.4, are the builders. The estimated price is £2,380.

BRENTFORD.—HALL.—The Park Baptist Church Council have appointed Messrs. Spalding and Myers, FF.R.I.B.A., 12, Newcourt, W.C.2, as architects for the proposed hall, for 350 persons, and two Sunday-schools, of 14 classrooms in all. No contracts have been placed. The site is in the Great Westroad.

CAMBERWELL.—BUILDING.—No building contracts have been placed for the new buildings at the corner of St. Mary's-road and Wellington-road. The architects are Messrs. Adams, Thompson and Fry, 58, Victoria-street, S.W.1.

CAMBERWELL.—MESS ROOM.—The B.C. proposes to erect a messroom and store at Camberwell New Cemetery, Honor Oak, S.E.23, to plans by Mr. Wm. Bell, A.M.Inst.C.E., F.S.I., Borough Surveyor. Tenders are being invited, to be returned by February 7.

CAMBERWELL.—REINSTATEMENT.—Mr. A. Woolnough, surveyor, 11, Roxley-road, Lee Green, S.E.13, has prepared the plans for the reinstatement after fire of premises at 38-40, Choumert-road. The plans have been passed by the B.C., and the building work is now being carried out by Messrs. W. T. Champion and Son, Peckham Rye, S.E.15.

CRICKLEWOOD-LANE. — HOUSING. — The Hampstead B.C. are about to proceed with their housing scheme for working-class dwellings on the Westcroft Farm site. No building contracts have yet been placed.

DEVONSHIRE-STREET. — SHOPS. — For shops and residential flats at the junction of Devonshire-street and High-street, W.1, Messrs. Marshall and Tweedy, FF.R.I.B.A., 4, Cavendish-place, Cavendish-square, W.1, are architects. The general contractors are Wilson Lovatt and Sons, Ltd., Victoria-street, S.W.1. Steelwork, Dorman, Long and Co., Ltd.; electrical installation, Duncan Watson, Ltd.; floors, Diespeker and Co., Ltd., Holborn Viaduct, E.C.; lifts, Marryatt and Scott, Ltd.

EAST HAM.—CLINIC.—The C.B. has received a letter from the M.H. stating that the Minister approves generally the plans for the erection of a new tuberculosis and chest clinic on the Durban House site. The Borough Engineer is preparing the plans and tenders are to be invited.

EAST HAM.—HALL.—Plans have been passed by the T.C. for the erection of a dance hall and billiard-room at the rear of Milton House, High-street South, for the Seymour Estates Ltd., Stanley-avenue, Gidea Park.

EDGWARE.—CONVERSION.—Messrs. John Laing and Son, Ltd., of Mill Hill, N.W.7, have been recommended, at £3,806, for conversion of the casual wards into offices at Redhill Institution for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, S.W.1, has prepared the plans.

FINCHLEY.—POOL.—The Borough Engineer to the T.C. has prepared a scheme, estimated to cost £7,000, for the construction of a children's swimming pool in connection with the open-air pool, adjacent to the existing pool.

FOREST HILL. — HOUSES.—The Manor Estate, Honor Oak, and Canobie-road is now in the course of erection by Messrs. Snow Bros., of 164, Peckham Rye, S.E.22. Plans have been approved by the L.C.C. for the erection of 20 houses, the plans being prepared by the firm's architect.

FRIERN BARNET.—HOUSES.—The Church Army Housing Society, 55, Bryanston-street, W.1, are to acquire sites for the building of improved houses. The plans will be prepared by Messrs. A. and J. Soutar, FF.R.I.B.A., 8, King William-street, W.C.2.

FULHAM.—FLATS.—The Fulham Housing Improvement Society, Ltd., 91, Dawes-road, S.W.6, are to acquire a site in Clancarty-road for flats. No architect has been appointed yet.

GEORGE-STREET. — BUILDINGS.—Messrs. Griggs and Son, 100, Victoria-street, S.W.1, are erecting buildings at the corner of George-street and Hanover-square. The architect is Mr. Gervase Bailey, F.R.I.B.A., King's building, Dean Stanley-street, S.W.1.

GERRARD - STREET. — REBUILDING. — H.M.O.W. Architect's Department have prepared plans for the rebuilding of the Gerrard telephone exchange. The new building will be six stories in height.

GRAY'S INN.—CHAMBERS.—Plans have been prepared by Messrs. Reeves, Son and Rason, 3, Gray's Inn-square, W.C.1, for a block of chambers and offices in Field-court. The contractors are Messrs. Woodward and Co., Wilson-street, E.C.2.

HAMMERSMITH. — CHAPEL.—The Irish Sisters of Mercy are to build a chapel, etc., at their convent at 22, Upper Mall, W.6. The contract has been let to Messrs. H. T. Oliver and Sons, Ltd., 1, Brixton-road, S.W.9. The architects are Messrs. Mitchell and Bridgwater, AA.R.I.B.A., 17, Hanover-square, W.1.

HAMMERSMITH. — FLATS. — Mr. R. J. Hugh Minty, F.R.I.B.A., 3, Great Peter-street, S.W.1, is the architect for flats at the corner of Hamlet-gardens and King-street. The building contract has been placed with Messrs. Prestige and Co., Ltd., 149, Grosvenor-road, S.W.1.

HARROW. — SCHOOL. — The estimate of £29,735, submitted to the Middlesex C.C. for the erection of a senior school in Locket-road, Harrow Weald, by Messrs. Kirk and Kirk, Ltd., 287, Upper Richmond-road, Putney, S.W.15, has been recommended for approval. The County Architect, Mr. W. T. Curtis, F.R.I.B.A., 10, Great George-street, S.W.1, has prepared the plans.

HENDON.—FLATS.—About 18 flats, etc., are to be built in Hendon-way, N.W., to the plans of Messrs. Welch, Cachemaille-Day and Lander, 7, New-square, W.C.2. The contractors are Messrs. A. J. Reynolds, Ltd., 925, Finchley-road, Golders Green, N.W.

HENDON.—HOUSES.—The R.D.C. has approved plans by Messrs. H. B. Silver, Ltd., builders, Station Estate Office, L.M.S. Station, Wealdstone, for 168 houses on sections 2 and 3 of the Southfield Park estate, Harrow Weald. The plans have been prepared by the builders.

HIGHGATE.—FLATS.—A block of 65 flats and garages is to be built on the Northfield estate, North Hill, N., to the plans of Messrs. Tecton, 57, Haymarket, S.W.1. No contracts.

LEA BRIDGE-ROAD.—OFFICES.—Mr. Edgar R. Taylor, A.R.I.B.A., 5, Manchester-square, W.1, is the architect for two shops with offices and showrooms over on the first and second floors at Nos. 611 and 611A. The builders are Messrs. Bridge and Co., 91, Effra-road, Brixton, S.W.

LEADENHALL-STREET. — ADAPTATIONS.—H.M.O.W. has placed a contract with Messrs. Soole and Son, Ltd., Dunstable Works, Sheen-road, Richmond, for adaptations to the branch post office, Whittington House, E.C.

LITTLE STANMORE. — HOUSES. — The Hendon R.D.C. has approved plans for the erection of 135 houses in Howberry-road, Waterfield-way and Cheyneys-avenue, for the D.C. Development Co., Ltd., Whitchurch-lane, Edgware.

LONDON.—FLATS.—The Society for Improving the Conditions of the Labouring Classes, 26, Hart-street, W.C.1, announce that quantities will be issued shortly for several blocks of flats as follows:—Old Kent-road, 45 flats; Park-place, Lambeth, 50 flats; and Shipman-road, Canning Town, 72 flats. Plans are by Messrs. Reeves, Son and Rason, 3, Gray's Inn-square, W.C.1.

MARYLEBONE.—FLATS.—The St. Marylebone Housing Association, Ltd., are to proceed with five six-floor blocks of model flats on their Wilcove-place site. A contract has now been placed with Messrs. Wilson Lovatt and Co., Ltd., Abbey House, Victoria-street, S.W.1. The architect is Mr. Louis de Soissons, F.R.I.B.A., Blue Ball-yard, St. James's-street, S.W.1.

MARYLEBONE.—PREMISES.—No contracts have yet been placed for a new building at 7 and 8, Jacob's Well-mews, W.1. The architects are Messrs. A. and V. Burr, 85, Gower-street, W.C.1.

MILL HILL. — EXTENSIONS.—Including offices, are to be made to Hyde-works, St. James's-lane, N., for Messrs. Cozens and Sutcliffe, Ltd. The contractors are Messrs. Bovis Ltd., 35, High-street, W.1. The architects are Messrs. Elcock and Sutcliffe, FF.R.I.B.A., Adam House, Strand, W.C.2.

MORDEN.—HOUSES.—About 90 acres of the Merton Park estate has been sold to Messrs. H. W. Selley (Builders), Ltd., 428, Southcroft-road, Streatham, S.W., who propose to develop the area. Plans are being prepared by Messrs. Edwin Evans and Sons, 253, Lavender-hill, Clapham Junction, S.W.11.

OLD FORD-ROAD. — PREMISES. — Messrs. Erith and Co., builders' material merchants, 530, High-road, E.11, are to have new premises at No. 455. The L.C.C. has approved the application submitted by Messrs. Hume and Erith, 9, Warwick-street, W.1.

OXFORD-STREET.—PREMISES.—The estimate of £20,273 submitted by Messrs. James Carmichael (Contractors), Ltd., 331, Trinity-road, Wandsworth, S.W.18, has been accepted for the erection of new premises at Nos. 169-171. The architect is Mr. Morris de Metz, A.R.I.B.A., 34, Upper Berkeley-street, W.1, and the demolition work will be carried out by Messrs. Goodman Price, Ltd., 181, Queen Victoria-street, E.C.4.

PICCADILLY.—BANK.—The British Linen Bank, Ltd., 38, Threadneedle-street, W.1, have acquired No. 198, for reconstruction as branch offices. The contract has been arranged with Messrs. Trollope and Colls, Ltd., 5, Coleman-street, E.C.2. The architects are Messrs. Campbell Jones, Son and Smithers, FF.R.I.B.A., 9, Dowgate-hill, E.C.4.

SHEPHERD MARKET.—FLATS.—The tender of Messrs. Dove Bros., Ltd., Cloudesley-place, Islington, N., has been accepted for high-class flats in Shepherds-street, Hertford-street and Carrington-street, W.1, for the Law Land Co., Ltd., Lancaster-place, W.C.2. Messrs. William and Edward Hunt, FF.R.I.B.A., Brettenham House, Lancaster-place, W.C.2, are the architects.

SHOREDITCH.—FACTORY.—Is to be built at Nos. 2-6, Curtain-road, and 1-3, Hearn-street, E.C. Messrs. Hearn and Chuter, 19, Basinghall-street, E.C.2, are the architects. The contract has been placed with Messrs. Sabey and Son, Ltd., 100, Great Russell-street, W.C.1.

SOUTHWARK. — HOUSING.—The Church Army Housing, Ltd., 55, Bryanston-street, W.1, are proposing to obtain a site at Bear-lane, Ayliffe-street, and Pitney-place areas for the erection of dwellings for the working classes. The scheme is in the early stage.

SOUTHWARK. — RECONSTRUCTION. — Mr. F. M. Kirby, F.R.I.B.A., of Messrs. Courage and Co., Ltd., brewers, Horselydown, S.E.1, has prepared the plans for the reconstruction of the "Queen's Head" public-house, 18, Amelia-street, S.E. The work is now proceeding and is being done by Messrs. H. and J. Taylor, Canada House, Hither Green-lane, S.E.13.

SOUTHWARK. — RECONSTRUCTION.—Work is now proceeding on the reconstruction of the "Albert Arms," Gladstone-street. The builders are Messrs. H. and J. Taylor, Canada House, Hither Green-lane, S.E.13, and the plans have been prepared by Mr. Sidney C. Clark, F.R.I.B.A., for the owners, Messrs. Hoare and Co., brewers, Red Lion Brewery, St. Katherine's-way, E.1.

STEPNEY.—TENEMENTS.—The trustees of the Peabody Donation Fund, 15, Buckingham-street, W.C.2, are to acquire a site in

Elm-row, E., for two blocks of model tenements. The society's architect is Mr. H. Victor Wilkins, F.R.I.B.A., 12, York-buildings, Adelphi, W.C.

SURBITON. — HOSPITAL. — Instructions have been given by the committee of the Surbiton and District Hospital to Mr. Wallace Marchment, F.R.I.B.A., Stanley House, Albion-road, S.W.8, to prepare working drawings for their proposed hospital at Ewell-road. The cost is estimated at £37,900.

SYDENHAM.—EXTENSIONS. — Plans have been prepared by Mr. Ashley S. Killby, F.R.I.B.A., 83-87, High-street, Tunbridge Wells, for the erection of a new wing to the South Eastern Hospital for Children. The contract has been placed with Messrs. W. J. Mitchell and Son, Ltd., Dulwich Village, S.E.21.

TWICKENHAM. — EXTENSIONS.—Including a new studio, etc., are to be made to the premises in St. Margaret's-road, of the Twickenham Film Studios, Ltd. Plans are by the company's staff.

TWICKENHAM. — FLATS. — Twenty-four flats and garages are to be erected at The Barrons, and 21 flats and garages on the Westbourne House estate, Richmond-road. The plans are by Messrs. Bierrum and Partners, 92, Victoria-street, S.W.1, who will carry out the work by direct labour, and start next week.

TWICKENHAM.—HOUSES.—Fulwell Park is to be converted into a residential estate. The erection of 400 houses is contemplated. Messrs. Wates, Ltd., builders, 98, London-road, Mitcham, are the new owners, and plans for the new houses have been prepared by the owners' architectural department.

WALTHAMSTOW. — ALTERATIONS.—Mr. H. R. Gardner, F.R.I.B.A., 32, Craven-street, W.C.2, is the architect for alterations to the "Flower Pot" public-house, Wood-street, E.

WALTHAMSTOW. — FACTORY.—A new factory is being erected in Eastern-road by Messrs. E. Fuller and Son, Beulah-road, E.17.

WALTHAMSTOW. — FACTORY.—Messrs. W. E. Silk and Son, 53, Elliott-road, S.W.9, are erecting a factory in Billet-road. The concrete work is being carried out by Messrs. F. Bradford and Co., of Homerton, E.9.

WEALDSTONE. — COURT HOUSE. — The Middlesex C.C. has placed a contract with Messrs. L. and W. Whitehead, Ltd., 169, Clapham-road, S.W.9, for a new court house in Rosslyn-crescent. The contract price is £20,833, and the plans have been prepared by Mr. W. T. Curtis, F.R.I.B.A., 10, Great George-street, S.W.1.

WESTMINSTER. — EXTENSION. — The facade of the Central Hall is to be completed for the Wesleyan Authorities. The architects for the completion are Messrs. Lanchester and Lodge, FF.R.I.B.A., 19, Bedford-square, W.C.1. No building contracts have yet been placed, and some time must elapse before plans will be ready for building.

WEYMOUTH-STREET. — RESIDENCE.—Mr. J. Gluckstein is to build a house at No. 22. Mr. Austin Blomfield, A.R.I.B.A., 7, Gray's Inn-square, W.C.1, is the architect. The contract will be carried out by Messrs. Bovis, Ltd., 35, High-street, W.1.

WILLESDEN.—FACTORY.—The Park Royal Development Co., Ltd., 84, Chancery-lane, W.C.2, have accepted the tender of Messrs. Redpath, Brown and Co., Ltd., 3, Duncannon-street, W.C.2, for 1,650 tons of steel for factory for Associated Agricultural Industries, Ltd. The plans have been prepared by Sir Alexander Gibb and Partners, Queen Anne's Lodge, S.W.1. Tenders for the superstructure will be invited.

WILLESDEN. — HOSPITAL. — Willesden U.D.C. is to erect extensions to the Maternity Hospital, Honeypot-lane, Kingsbury, N.W.9, to plans by Mr. F. Wilkinson, the Borough Engineer. Tenders (returnable by February 23) are now being invited, and applications to tender must be received by the Town Clerk by January 26.

BUILDING WAGES

THE National Joint Council for the Building Industry, which controls the machinery for the adjustment of wages, met yesterday (January 11). It is understood that there will be no drop in wages on February 1 under the "cost of living" sliding scale, but that, on the other hand, nearly 180 towns have made successful application for re-grading one or more classes higher. For the most part, these are market towns in the West, South-West, South and East of England, where, for some time, it has been felt that wages were disproportionately low as compared with the Midlands and North. This regrading will, in most cases, have the effect of increasing wages in those towns by ½d. per hour.

The year just completed has been one remarkably free from dispute within the industry. For this, the work of the organisation set up under the National Joint Council is mainly responsible. Machinery for settling disputes, either by the local associations or, failing that, by regional or national action, is in operation, and has worked most smoothly.

The year, we are informed, has seen the extended success of the 1931 Form of Contract, which is fast replacing other forms. Its extending popularity is due, first, to the fact that it has been based on modern requirements, and, second, that provision has been made, in the form of an amendment committee, for revision as the need for such becomes established. So far, local authorities have not been invited to adopt this Form, but it is understood that an official invitation may be issued during the year for them to adopt the 1931 Form, with such slight modification as may be necessary to place it on all fours with their current practice. It is not without significance that upwards of ninety local authorities have voluntarily adopted the 1931 Form of Contract. There is little doubt that general adoption by local authorities and municipalities would be a step forward in the simplification of the contract question.

PRICES OF BUILDING MATERIALS

SIR SAMUEL ROBERTS, Chairman of the Inter-Departmental Committee appointed to survey the prices of building materials, in his report to the Minister of Health and the President of the Board of Trade for the period up to November, 1933, summarises the principal recent fluctuations in the prices of building materials, based upon reports of prices received from the Committee's correspondents during the month of November, 1933, as follows :—

Bricks.—During the earlier months of this year there was a somewhat unexpected increased activity in building in various parts of the country, for which, particularly in view of the previous period of stagnation, manufacturers were not prepared. In some parts of the country common bricks were for a time difficult to obtain. I understand, however, that the position is now much easier and that speaking generally, although there may still be a few instances of shortage, manufacturers have now very largely overtaken the shortage created by the unexpected demand. There were some instances of hardening of prices, but, with few exceptions, prices do not show any increase over the prices obtaining before the period of stimulated demand.

Lime and Cement.—In no case has the price of lime risen recently, and in some instances reductions in price have been reported during the past few months. As regards *cement*, there have been substantial reductions in the price in most districts during the last eighteen months; in no case has any recent increase in price been reported.

Timber.—In recent months there has been an advance in several districts in the prices of *carcassing timber*, the increase varying from 5s. to £2 per standard. In some cases, however, no increase in price is reported. There has also been some increase in the prices of *joinery* and *flooring timber*. I should, however, point out that until recently there had been a steady decline in timber prices and that the present prices are generally lower than they were two years ago.

Tiles and Slates.—No general fluctuations have been reported in the prices of these articles.

Lead.—A number of districts report increases during the past few months, but there is some indication that the price is again falling. The present price of lead is substantially lower than it was before the war.

Cast Iron.—There has been some advance in the prices of *rain water goods*, but prices do not exceed those which obtained at the time when the Committee investigated prices and reported that the investigation did not show that an undue profit was being made by the members of the National Light Castings Association as far as housing schemes were concerned. I have been in communication with the successors of that Association, namely, the British Iron Founders' Association, on the matter, who state that while present prices represent an advance on previous prices, they merely represent the stabilisation, at a level of cost, of prices which during the past two or three years had, owing to unrestricted competition, fallen to a level which was absolutely uneconomic.

The price of *baths* shows some increase in most districts, inquiries into which are now being made.

Glazed-ware.—The price of *w.c.s* has remained constant, but the price of *sinks* has increased somewhat in most districts.

Glass.—Reports in most instances indicate that the price of glass has fallen.

NATIONAL FEDERATION OF HOUSE BUILDERS

IN the course of a "Message for the New Year," Mr. R. W. Jennings, President of the National Federation of House Builders, writes as follows :—

"The house-building trade anticipates a very busy year for the following reasons :—

"(1) With the withdrawal of the 1924 Wheatley Subsidy and the special facilities granted to builders and investors under the 1933 Housing Financial Act, it is expected that a total of houses 'to let' and 'for sale' built by private enterprise will reach 200,000 during the year, providing councils do not build in opposition without the subsidy.

"(2) Investors are now seeking new small houses as an outlet for their money, instead of allowing it to remain in the banks on deposit, earning low rate of interest.

"(3) A large number of purchasers are making inquiries to buy a house for their own occupation, now they feel that there is no likelihood of a return to the conditions of the 1931 financial crisis period; and, also, they are now assured that building materials have touched rock bottom and have started to rise in price.

"To the builder who will erect small houses during 1934 with the help of the special cheap building society rates of interest on loans to occupier-owners, and the special building society rates and long-period terms on houses to let with Government and local authority guarantees, prosperity for 1934 is assured.

"Private enterprise builders can confidently say that they have built two-thirds of all the houses erected since the war and 90 per cent. of all the houses before the war, and will build all that are required in the future, if no fresh unfair competition arises.

"In 20 years from March 31, 1894, to March 31, 1914, the number of houses built was 1,903,403, an average of 97,170 per year. Whereas, from March, 1914, till September 30, 1933, 2,282,948 have been built, add 75,000, the likely figure which will be built by March 31, 1934, which makes it 20 years (total 2,357,948), which is equal to 117,897 per year."

The Quarterly Conference will be held in Manchester on January 15.

REINFORCED CONCRETE IN BUILDINGS

RECOMMENDATIONS FOR A NEW CODE OF PRACTICE.

MANY of the impediments to the development of reinforced concrete construction in this country arising from out-of-date rules of practice should be removed by the adoption of the recommendations of a Report* just issued by the Department of Scientific and Industrial Research. This contains the findings of an authoritative committee, under the chairmanship of Sir George Humphreys, appointed in 1931 to "review present methods and regulations for the use of reinforced concrete in building and to make recommendations for rules of practice embodying the best available technical information and experience." These recommendations are set out in a new code of practice appended to the Report. They are based on existing knowledge and experience, since no funds have been available for research work in relation to them.

The Report states that, apart from the national need for authoritative rules of practice, "the London County Council had specifically asked to be furnished, in connection with the review of the London Building Act, with recommendations for a code of practice for the use of reinforced concrete in buildings similar to that drawn up by the Steel Structures Research Committee for the use of structural steel."

The Committee state that their attention was drawn "to the legal position outside London regarding reinforced concrete for building, which is that detailed regulations are not in force, such by-laws as exist being unrestrictive. It was impressed upon them that their work was limited, by their terms of reference, to the preparation of technical rules of practice; and that they were in no way concerned with administrative action thereon. At the same time, they were led to hope that their code of practice would be of service to local authorities in the administration of their by-laws, and that reference would be made to it in the model by-laws issued from the Ministry of Health."

Comments on the New Code by Dr. Stradling.

Asked to summarise and comment on the provisions of the new code, Dr. Stradling, the Director of Building Research under the Department of Scientific and Industrial Research, said: "It has been common experience in the past to find that rigid adherence to regulations has barred the development of new methods of construction, and has even made it uneconomical to make the best use of the materials available. The Code of Practice now recommended has been drawn up in such a manner as to assure good practice, while not handicapping progress and to leave the door open to the adoption of new methods where these are adequately established. Thus with the stresses in concrete at present allowed, there has, formerly, been little incentive to make the best use of the materials. No matter how the concrete has been made, it has been realised that it was perfectly safe.

"Impressed with the great improvement in cements and aggregates, the Committee came to the definite conclusion that 'industry has at this time reached a stage in development when advantage should be given to the engineer who is prepared to spend time and money in producing consistently controlled concrete. In other words, the day has passed when one stress only should be permitted for a mix, regardless of the care exercised and the general level of strength achieved.

Three Grades of Concrete Allowed.

"With this in mind the Committee have proposed three grades of concrete. The first, Ordinary Grade, corresponds to the 750 lb. per sq. in., the weakest mix of concrete considered (1 : 2 : 4 concrete), with appropriate increases in stresses for richer mixes. This is for use where rigid control is not exercised; it is easy to produce concrete of adequate strength with sound materials. The second grade, High Grade, calls for proof of strength by preliminary tests, for greater control of concrete quality, and for a definite programme of tests on the site on the deposited concrete. The stresses permitted are roughly 25 per cent. greater than for Ordinary Grade concrete and represent present-day practice in high-class concrete works. The third grade, Special Grade, calls for greater exercise of control and more frequent testing. For this grade preliminary test results are made the basis of the working stresses, which may be as great as 25 per cent. greater than those permitted for High Grade concrete. When it is realised that concrete has been produced throughout certain large works in London of a strength consistently higher than 6,500 lb. per sq. in. and in some cases as high as 10,000 lb. per sq. in., the justification for increased permissible stresses will be appreciated.

"It is also of interest to observe that, as stated in the Prefatory Note to the Report, 'the Building Research Station has had the opportunity, in connection with other work, of carrying out systematic strength tests, according to the methods laid down in the recommended Code of Practice, in the course of the construction of a number of reinforced-concrete buildings. No special attempt was made by the firms concerned to control the quality of the concrete, and it is fair to assume that the concrete is representative of modern practice. The results have shown conclusively that the levels of strength demanded for the work's tests can be maintained with ease. In one case the lowest individual cube strength recorded was 100 per cent. above the strength required for High Grade concrete, in another case the margin was 55 per cent., and in the worst case 15 per cent. Parallel preliminary tests have been made at the Building Research Station, and in every case the work's cube strengths obtained satisfied the requirements for Special Grade concrete.

Steel.

"Steel stresses have also been increased above those permitted by the present L.C.C. regulations, provided certain conditions as regards yield point stress are satisfied, in order to give a reasonable factor of safety. It is of special interest to note that the yield point figure is taken as the criterion; this is in accordance with best Continental and American practice, but is new in Great Britain. Except for direct stress in compression, these permissible stresses for steel do not, however, represent any departure from existing practice in certain parts of the country.

The Creep of Concrete.

"The effect of creep or flow of concrete under load is always to transfer load from the concrete to the steel, and modifications have been adopted which, in effect, allow for that transfer. Thus, whereas formerly the steel in axially loaded columns was stressed to 9,000 lb. per sq. in., stresses up to 15,000 lb. per sq. in. are now permitted.

"Simplified methods of bending moment calculation are permitted, and certain reductions allowed at points where practical difficulties of concrete consolidation are likely to arise, provided sections elsewhere are appropriately strengthened.

"Attention may also be drawn to the method outlined for the design of slabs spanning in two directions at right angles. Under present regulations simply supported slabs are the only ones specifically dealt with, whereas the new methods provide also for slabs continuous on all sides.

Elimination of Formulæ.

"The elimination in the Code of ordinary formulæ will also be noticed. The principles involved are clearly stated, but the actual detailed application is left, as it should be, to the designer. Finally, the permission to utilise special forms of construction and special materials, wherever they conform to standard strength durability at least equivalent to that demanded by the Code of Practice, will definitely give an encouragement to initiative and enterprise."

* Report of the Reinforced Concrete Structures Committee of the Building Research Board. Published H.M. Stationery Office, price 1s. 3d.

NEW CINEMAS

BIRMINGHAM.—The Estates Committee of the City Council recommend the leasing of a site at the junction of Weoley Castle-road and Gregory-avenue to Mr. J. M. McIntosh, of 6, Cherry-street, Birmingham, for the purpose of the erection of a cinema. Plans are by Mr. Hurley Robinson, F.R.I.B.A., 6, Cherry-street, Birmingham.

BLACKPOOL.—Plans have been passed by the County Borough providing for a cinema with shops in Lytham-road, for the Majestic Cinema Co.

BRAINTREE.—Plans have been approved by the U.D.C. for a new cinema to be erected by Messrs. Shipman and King, to replace the Palace Cinema in Fairfield-road. Plans have been prepared by Messrs. Howis and Belcham, 9, Fenchurch-street, E.C.3.

CAMPBELTOWN, ARGYLLSHIRE.—Plans have been prepared for reconstruction and extension of the Picture House, Campbeltown, by Mr. Albert Gardner, architect, 164, Bath-street, Blytheswood, Glasgow. A contract for the steel structural work has been placed with Messrs. Redpath, Brown and Co., Ltd., Waterloo-street, Blytheswood, Glasgow.

DUBLIN.—Plans for a cinema in Drumcondra-road, near Clonturk Park, for Messrs. C. Ging and Co., have been passed by the City Architect.

JERSEY, C.I.—Plans for the proposed £50,000 cinema and ballroom in Hill-street, St. Helier, are being prepared by Mr. F. C. Mitchell, L.R.I.B.A., 80, George-street, Portman-square, W.1. Building contracts will be placed soon. The promoters are the Forum, Ltd., Hill-street, St. Helier, Jersey, Channel Islands.

NEWCASTLE-ON-TYNE.—Tenders for the proposed new "Lyric" Cinema, to accommodate 1,600 people, to be built for Mr. J. H. McHarg, of Wallsend, are to be obtained immediately. The architects are Messrs. Marshall and Tweedy, FF.R.I.B.A., 129, Pilgrim-street, Newcastle-upon-Tyne.

STOCKTON-ON-TEES. — The T.C. has passed plans submitted on behalf of the Grand Theatre Company for alterations at the Grand Theatre, Bishop-street.

WYTHENSHAWE.—Messrs. Heenan and Froude, Newton Heath Iron Works, Manchester, have secured the steelwork contract, and the roofing has been let to Turner's Asbestos Cement Co., Trafford Park, Manchester, for the cinema to be erected at Longley-road for Mrs. Burns, of the Electra Cinema, Chapel-street, Cheadle, Cheshire. Mr. Charles Hartley, 128, Buxton-road, Stockport, has prepared plans.

Architectural Assistants Required.

Manchester Corporation require a temporary architectural assistant under the Housing Committee, The commencing salary is £305 per annum. Applications (on a special form, obtainable from the Housing Director, Town Hall, Manchester) must be returned by January 25.

Eastbourne County Borough invite applications for the position of architectural assistant in the Borough Engineer's office, at a commencing salary of £450 per annum. Preference will be given to men having passed the examination of the R.I.B.A. and with previous experience in public works and schools construction. Applications must be addressed to Mr. Leslie Roseveare, M.Inst.C.E., Borough Engineer, Town Hall, by January 20.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st OCTOBER, 1933.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Craftsmen.	Labourers.
Aberdare	1/5	1/0½
Abergavenny	1/5	1/0½
Aberystwyth	1/2	10½
Accrington	1/5½	1/1½
Aldeburgh	1/1½	10½
Aldershot	1/2	10½
Alfreton	1/5½	1/1½
Alnwick	1/4½	1/0½
Altrincham	1/5½	1/1½
Amble	1/4½	1/0½
Amersham	1/3½	11½
Ammanford	1/5½	1/1½
Andover	1/2	10½
Arundel	1/2½	11
Ascot	1/3½	11½
Ashby-de-la-Zouch	1/4	1/-
Ashford (Kent)	1/2	10½
Ashford (Middx.)	1/4	1/-
Ashington	1/4½	1/0½
Ashtead	1/4	1/-
Ashton-under-Lyne	1/5½	1/1½
Aylesbury	1/2½	11
Aylsham	1/2	10½
Bagshot	1/2	10½
Banbury	1/3	11½
Barnsley	1/5½	1/1½
Barnstaple	1/3½	11½
Barrow-in-Furness	1/5½	1/1½
Barry	1/5½	1/1½
Basingstoke	1/3	11½
Bath	1/4	1/-
Batley	1/5½	1/1½
Beaconsfield	1/3½	11½
Beccles	1/2	10½
Bedford	1/4	1/-
Berkhamsted	1/2	10½
Berwick	1/4½	1/0½
Beverley	1/5½	1/1½
Bexhill	1/3	11½
Bideford	1/3½	11½
Biggleswade	1/3	11½
Billericay	1/2	10½
Birchington	1/3	11½
Birkenhead	1/7‡	1/2½
Birmingham	1/5½	1/1½
Bishop Auckland	1/5	1/0½
Bishops Stortford	1/3	11½
Blackburn	1/5½	1/1½
Blackpool	1/5½	1/1½
Blindley Heath	1/3	11½
Blyth	1/5½	1/1½
Bognor Regis	1/2½	11
Bolton	1/5½	1/1½
Bournemouth	1/4	1/-
Bracknell	1/3	11½
Bradford	1/5½	1/1½
Bradford-on-Avon	1/2*	10½
Braintree	1/3½	11½
Brentwood	1/5	1/0½
Bridgwater	1/3	11½
Bridlington	1/5	1/0½
Brighouse	1/5½	1/1½
Brighton	1/4	1/-
Bristol	1/5½	1/1½
Broadstairs	1/3	11½
Bromsgrove	1/4½	1/0½
Bromyard	1/1½	10½
Buckley	1/5½	1/1½
Bungay	1/1	9½
Burnham-on-Crouch	1/2	10½
Burnley	1/5½	1/1½
Burslem	1/5½	1/1½
Burton-on-Trent	1/5½	1/1½
Bury	1/5½	1/1½
Bury St. Edmunds	1/2½	11
Buxton	1/5	1/0½
Byfleet	1/3	11½
Cambridge	1/4½	1/0½
Canterbury	1/2½	11
Cardiff	1/5½	1/1½
Carlisle	1/5½	1/1½
Carnforth	1/5½	1/1½
Castleford	1/5½	1/1½
Caterham	1/4	1/-
Chard	1/1½*	10½
Chatham	1/3½	11½
Chelmsford	1/3½	11½
Cheltenham	1/4	1/-
Chepstow	1/4½	1/0½
Chertsey	1/4	1/-
Chester	1/5½	1/1½
Chesterfield	1/5½	1/1½
Chichester	1/2½	11
Chorley	1/5½	1/1½
Cirencester	1/2½*	11
Clacton	1/3½	11½
Cleveleys	1/3½	1/1½
Clitheroe	1/5½	1/1½
Cobham	1/4	1/-
Colchester	1/4	1/-
Colwyn Bay	1/4½	1/0½
Congleton	1/5	1/0½
Coventry	1/5½	1/1½
Cranbrook	1/1	9½
Cranleigh	1/2½	11
Crawley	1/3	11½
Crewe	1/4½	1/0½
Cromer	1/2	10½
Crowborough	1/3	11½
Cuckfield	1/3	11½
Darlington	1/5½	1/1½
Darwen	1/5½	1/1½
Daventry	1/3½	11½
Deal	1/2½	11
Denbigh	1/4	1/-
Derby	1/5½	1/1½
Devizes	1/2*	10½
Dewsbury	1/5½	1/1½
Didcot	1/3½	11½
Diss	1/2	10½
Doncaster	1/5½	1/1½
Dorchester	1/2½*	11
Dorking	1/3	11½
Dover	1/2½	11
Dovercourt	1/3½	11½
Driffield	1/4	1/-
Droitwich	1/4½	1/0½
Dudley	1/5½	1/1½
Dunstable	1/2	10½
Durham	1/5½	1/1½
Eastbourne	1/4	1/-
E. Glam. (Mon. Val.)	1/5	1/0½
East Grinstead	1/3	11½
Edenbridge	1/3	11½
Ely	1/2	10½
Epping	1/4	1/-
Exeter	1/4½*	1/0½
Exmouth	1/3	11½
Fakenham	1/2	10½
Falmouth	1/3½	11½
Fareham	1/3	11½
Faversham	1/2	10½
Felixstowe	1/4	1/-
Filey	1/4	1/-
Fleetwood	1/5½	1/1½
Flint	1/5½	1/1½
Folkestone	1/2½	11
Frinton-on-Sea	1/3½	11½
Frome	1/2½*	11
Gainsborough	1/4	1/-
Gateshead	1/5½	1/1½
Gillingham	1/3½	11½
Glossop	1/5½	1/1½
Gloucester	1/4½*	1/0½
Godalming	1/3	11½
Goole	1/4½	1/0½
Gosport	1/4	1/-
Grantham	1/4	1/-
Gravesend	1/5	1/0½
Gt. Yarmouth	1/3	11½
Grimsby	1/5½	1/1½
Guildford	1/3	11½
Guilsborough	1/3½	11½
Halifax	1/5½	1/1½
Hanley	1/5½	1/1½
Harpenden	1/3	11½
Harrogate	1/5½	1/1½
Hartlepools	1/5½	1/1½
Harwich	1/3½	11½
Haslemere	1/2½	11
Hastings	1/2½	11
Hatfield	1/4	1/-
Haywards Heath	1/3	11½
Hednesford	1/4½	1/0½
Hemel Hempstead	1/4	1/-
Henley	1/3½	11½
Hereford	1/3½*	11½
Herne Bay	1/2	10½
Hertford	1/4	1/-
Heysham	1/5½	1/1½
Hitchin	1/3½	11½
Hoddesdon	1/4	1/-
Holt	1/1	9½
Horley	1/3	11½
Horsham	1/2½	11
Horwich	1/5½	1/1½
Huddersfield	1/5½	1/1½
Hull	1/5½	1/1½
Hunstanton	1/2	10½
Huntington	1/2½	11
Ilfracombe	1/2½	11
Ingatestone	1/3	11½
Ipswich	1/1	1/-
Isle of Thanet	1/3	11½
Isle of Wight	1/2	10½
Keighley	1/5½	1/1½
Kenilworth	1/5½	1/1½
Kettering	1/4½	1/0½
Kidderminster	1/4½	1/0½
King's Lynn	1/2½	11
Kirkham	1/5½	1/1½
Knowle	1/4½	1/0½
Lancaster	1/5½	1/1½
Leamington	1/5	1/0½
Leatherhead	1/4	1/-
Leeds	1/5½	1/1½
Leicester	1/5½	1/1½
Leighton Buzzard	1/2	10½
Letchworth	1/3½	11½
Lewes	1/2	10½
Lichfield	1/4½	1/0½
Lincoln	1/5½	1/1½
Littlehampton	1/2½	11
Liverpool	1/7‡	1/2½
Llandudno	1/4½	1/0½
Llanelly	1/5½	1/1½
London—		
12 m. radius	1/7*	1/2½
12-15 m. radius	1/6½*	1/2
Long Eaton	1/5½	1/1½
Longton	1/5½	1/1½
Loughborough	1/5½	1/1½
Louth	1/4	1/-
Lowestoft	1/3	11½
Luton	1/4	1/-
Macclesfield	1/5	1/0½
Maidenhead	1/4	1/-
Maidstone	1/3½	11½
Malvern	1/4	1/-
Manchester	1/5½	1/1½
Manningtree	1/2	10½
Mansfield	1/5½	1/1½
March	1/2	10½
Margate	1/3	11½
MarketHarborough	1/4	1/-
Matlock	1/4	1/-
Melton Constable	1/1	9½
Melton Mowbray	1/4½	1/0½
Merthyr Tydfil	1/5	1/0½
Middlesbrough	1/5½	1/1½
Middleton	1/5½	1/1½
Middlewich	1/4½	1/0½
Milford Haven	1/3½	11½
Morecambe	1/5½	1/1½
Morley	1/5½	1/1½
Mundesley	1/2	10½
Nantwich	1/4½	1/0½
Newark	1/4½	1/0½
Newbury	1/2½	11
Newcastle-on-Tyne	1/5½	1/1½
Newcastle-u.-Lyme	1/5½	1/1½
New Forest	1/2½	11
Newmarket	1/3	11½
Newport, Mon.	1/5½	1/1½
Newport Pagnell	1/2	10½
Northampton	1/5	1/0½
Norwich	1/4½	1/0½
Nottingham	1/5½	1/1½
Nuneaton	1/5½	1/1½
Oakham	1/4	1/-
Oldham	1/5½	1/1½
Ormskirk	1/5½	1/1½
Oxford	1/4½	1/0½
Oxted	1/2½	11
Paignton	1/4½	1/0½
Peterborough	1/4½	1/0½
Plymouth	1/5½*	1/1½
Pontypridd	1/5	1/0½
Portsmouth	1/4	1/-
Port Talbot	1/5½	1/1½
Preston	1/5½	1/1½
Pulborough	1/2	10½
Ramsgate	1/3	11½
Reading	1/4½	1/0½
Redcar	1/5½	1/1½
Redditch	1/4½	1/0½
Redhill	1/3½	11½
Reigate	1/3½	11½
Retford	1/4	1/-
Ripon	1/4	1/-
Rochdale	1/5½	1/1½
Rochester	1/3½	11½
Rugby	1/5½	1/1½
Saffron Walden	1/2	10½
St. Albans	1/4½	1/0½
St. Helens	1/5½	1/1½
St. Neots	1/2½	11
Salisbury	1/2*	10½
Salisbury Plain	1/2½*	11
Sawbridgeworth	1/3½	11½
Saxmundham	1/1½	10½
Scarborough	1/5	1/0½
Selby	1/5½	1/1½
Sevenoaks	1/3½	11½
Sheerness	1/2½	11
Sheffield	1/5½	1/1½
Shipley	1/5½	1/1½
Shoeburyness	1/4½	1/0½
Shrewsbury	1/4½	1/0½
Sittingbourne	1/2	10½
Skegness	1/4	1/-
Sleaford	1/4	1/-
Slough	1/4	1/-
Southampton	1/4½	1/0½
Southend-on-Sea	1/4½	1/0½
Southport	1/5½	1/1½
South Shields	1/5½	1/1½
Spalding	1/3	11½
Stafford	1/4½	1/0½
Staines	1/4	1/-
Stamford	1/4	1/-
Stevenage	1/3½	11½
Stockport	1/5½	1/1½
Stockton-on-Tees	1/5½	1/1½
Stoke-on-Trent	1/5½	1/1½
Stourbridge	1/5	1/0½
Stourport	1/4½	1/0½
Stowmarket	1/2	10½
Stratford-on-Avon	1/4	1/-
Stroud	1/3½†	11½
Sunderland	1/5½	1/1½
Sutton Coldfield	1/5½	1/1½
Swaffham	1/1	9½
Swanage	1/3½*	11½
Swansea	1/5½	1/1½
Swindon	1/4*	1/-
Tamworth	1/5	1/0½
Taunton	1/3½	11½
Tenterden	1/2	10½
Tewkesbury	1/4*	1/-
Thetford	1/2	10½
Thorpe Bay	1/4½	1/0½
Todmorden	1/5½	1/1½
Tonbridge	1/3½	11½
Torquay	1/5	1/0½
Totnes	1/3½†	11½
Trowbridge	1/2½*	11
Truro	1/1½	10½
Tunbridge Wells	1/3½	11½
Uppingham	1/4	1/-
Uttoxeter	1/3½	11½
Wakefield	1/5½	1/1½
Walsall	1/5½	1/1½
Walsden	1/5½	1/1½
Walton-on-Naze	1/3½	11½
Ware	1/4	1/-
Warminster	1/2*	10½
Warrington	1/5½	1/1½
Warwick	1/5	1/0½
Wellingborough	1/4½	1/0½
Wells (Norfolk)	1/1	9½
Welwyn	1/3	11½
Welwyn Gar. City	1/4½	1/0½
West Bromwich	1/5½	1/1½
Westcliff-on-Sea	1/4½	1/0½
Weston-super-Mare	1/4½	1/0½
Weybridge	1/4	1/-
Weymouth	1/3*	11½
Whitby	1/4½	1/0½
Whitstable	1/2	10½
Widnes	1/5½	1/1½
Wigan	1/5½	1/1½
Wigton	1/4	1/-
Willington	1/5	1/0½
Wilmslow	1/5½	1/1½
Winchester	1/3	11½
Windermere	1/3½	11½
Windsor	1/4	1/-
Wisbech	1/2	10½
Witham	1/2½	11
Woking	1/3½	11½
Wokingham	1/3½	11½
Wolverhampton	1/5½	1/1½
Woodbridge	1/2	10½
Worcester	1/4½	1/0½
Workington	1/4	1/-
Worksop	1/4	1/-
Worthing	1/2½	11
Wrexham	1/5	1/0½
Wroxham	1/2½	11
Wycombe	1/4	1/-
Wymondham	1/1½	10½
Yeovil	1/3*	11½
York	1/5½	1/1½

* Painters, 1d. less than other Craftsmen. † Painters, ½d. less than other Craftsmen. ‡ Plasterers, 1s. 8d.

For Building Trade Wages in Scotland, see page 110

CONTRACTS OPEN

For some contracts still open, but not included in this List, see previous issue. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

JANUARY 15.

Batley.—Painting.—At County Institution, for West Riding P.A.C. County Architect, Wakefield.

Bridgend.—Alterations.—And additions to District Hospital, for Committee. A. G. Edwards, L.R.I.B.A., architect, Park-st. Dep. £2 2s.

Bury.—Dwellings.—For firemen in Paradise-st., for T.C. B.E. Dep. 10s.

Crediton.—Alterations.—And additions at Mental Deficiency Institution, for Devon County Mental Deficiency Committee. County Architect, 97, Heavitree-rd., Exeter. Dep. £1 1s.

Dumfries. — Heating. — Installation at Clerkhill Hostel, for T.C. B.S.

Dundee.—Installation.—Of electric lighting at central police station, Bell-st., for T.C. D. B. M'Lay, City Architect, 21, City-sq.

Edinburgh.—Alterations.—At Nos. 21-24, Queen-st., for H.M.O.W. Architect, H.M. Office of Works, 122, George-st. Dep. £1 1s.

Kilrush.—Houses.—32 four-roomed, at Pella-rd., for U.D.C. J. C. Clancy, T.C. Dep. £5 5s.

Loughrea.—Houses.—12, at Cabbage-lane, for T.C. T.C. Dep. £5.

Peebles.—Hall.—At Northgate. A. H. Swanson, 12, Kirkland-st.

Plympton.—Telephone Exchange.—For H.M.O.W. Room 65d, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Preston.—Alterations.—And additions to maternity block at Sharoe Green Hospital, Fulwood, for T.C. B.E. and S. Dep. £1.

Sheffield.—Painting.—At County Poor Law Institution, Grenoside, for West Riding C.C. County Architect, Wakefield.

Southend-on-Sea.—Convenience.—Of concrete, in Apron Wall on Eastern Esplanade opposite Bryant-av. and incidental works in connection thereto, for T.C. R. H. Dyer, B.E. Dep. £2.

Southport.—Entrance.—To foyer, staircase and cloakrooms at Floral Hall, for T.C. A. E. Jackson, B.E. Dep. £1 1s.

Straidnahanna. — Latrines. — At P.E. school, County Antrim, for Larne Regional Committee. S. Robinson, architect, Victoria-st., Larne.

JANUARY 16.

Cork.—Railway.—And gates at swimming-pool, Lee Fields, for T.C. City E.

Lanchester.—Painting.—Of 6 cottage homes at Poor Law Institution, for Durham C.C. C.S., Durham.

Sheffield.—Houses.—338, on Wybourn estate, scheme No. 10, for T.C. W. Geo. Davies, F.R.I.B.A., City Architect. Dep. £2.

Tottenham.—Installation.—Of electricity, at town hall and central baths, for U.D.C. F. C. Raphael, Napier House, 24-27, High Holborn, W.C.1. Dep. £2 2s.

Trevor.—Bakery.—For Rifl Workmen's Co-operative Society, ltd. Griffith Morris, F.I.A.A., architect and surveyor, High-st., Portmadoc.

JANUARY 17.

Cheltenham.—Exterior Painting.—Of 136 houses in various roads, for T.C. B.E.

Cork.—Houses.—4, at Glasheen-rd. Chillingworth & Levie, architects, 11, South Mall.

Dorset.—Erection.—Of Post Office, County Court at Blandford, for H.M.O.W. Room 65p, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Downpatrick.—Additional Story.—Over therapy department building (male side) at Down Mental Hospital. C.S., Downpatrick.

Ipswich.—Houses.—50, in Gainsborough estate and 16, in New Cardinal-st., for T.C. E. McLauchlan, B.S. and Water E. Dep. £2 2s.

Ipswich.—Repairs.—To property, for E.C. A. Armitage, secretary to E.C., Tower House.

Liverpool.—Painting.—Of offices and corridors at several baths and wash-houses, for T.C. Baths Manager, 75, Dale-st.

Manchester.—Shops.—Five, at Sharston, on Wythenshawe estate, for T.C. City Architect. Dep. £1 1s.

Ramsey.—Foundations.—For pump house, for Ramsey, Upwoid and Gt. Raveley Drainage Board. E. to Board, "Elmhurst," Brookland-av., Cambridge. Dep. £1.

South Kensington.—Completion.—Of Office Block, Science Museum, for H.M.O.W. Room 65d, Third Floor, H.M. Office of Works, S.W.1. Dep. £1.

JANUARY 18.

Belcoo.—Barrack.—For Government of Northern Ireland, Secretary, Ministry of Finance, May-st., Belfast. Dep. £1.

***Chelmsford.**—Erection of roadmen's cottages at Beehive-lane, for Essex C.C. County Architect, County Hall. Dep. £2 2s.

Glasgow.—Houses.—78, at Shettleston (first section), for T.C. T.C.

Glasgow.—Houses.—42 on Kelvindale-rd. housing scheme, for T.C. T.C.

Haverhill.—Houses.—Four, in Mill Hill, for U.D.C. S. Dep. £1 1s.

Lutterworth. — Alteration. — And extension of sewage disposal works, for R.D.C. Pick, Everard, Keay & Gimson, engineers, 6, Millstone-lane, Leicester. Dep. £2 2s.

Manchester.—Wrought Iron Fencing.—At proposed recreation ground, Chapman-st., Gorton, for T.C. City E. Dep. £1 1s.

Moira.—Residence.—And dispensary, for Lurgan Union. W. R. Rogers, architect, Friends Provident-bldgs., 68, Howard-st., Belfast.

Newcastle-upon-Tyne.—Demolition.—Of 154 munition workers' huts on Scotswood housing estate, for T.C. Housing Architect, 18, Cloth Market.

Silsden.—Pavilion.—Shelters and paddling pool, also laying-out of recreation ground, for Playing Fields Association. R. B. Broster & Sons, architects, surveyors and valuers, Craven Bank-chams., Keighley. Dep. £1.

Wallasey.—Timber Sheds.—On Corporation housing estate, Moreton, for T.C. B.E.

JANUARY 19.

Edinburgh.—Schools.—At Craigmillar, and installation of electric lighting at Granton Mains primary school, for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

***Maidstone.**—Erection of North Borough School, for T.C. T. F. Bunting, B.S., Palace-av. Dep. £2 2s.

JANUARY 20.

Clevedon.—Conveniences.—On sea front, for U.D.C. I. J. Leach, Surveyor's Office, Old-st.

Coalville.—School.—For about 550 scholars, for Leicestershire C.C. County Architect, Leicester. Dep. £2 2s.

Henley-on-Thames.—Erection.—Of new buildings at existing bathing place, Wargrave-rd., for T.C. B.S., Town Hall.

Lytham St. Annes.—Houses.—10, at Squiresgate, for T.C. B.E. and S.

Plymouth.—Extension.—Of about 180 ft. of boundary wall at Weston Mill Cemetery, for T.C. City E.

***Tottenham.**—Houses.—On Weir Hall estate, for U.D.C. Capt. H. F. Wilkinson, R.E., M.Inst., C.E., engineer, Town Hall. Dep. £2.

QUARZITE
A NATURAL ROCK
THREE SELF TONES
GOLD OLIVE GREY
HARDER THAN GRANITE
UNUSUAL
TEXTURE
JOHN STUBBS & SONS

Ulverston.—Alterations.—And additions to administrative block at High Carley Fever Hospital, for Joint Hospital Board. J. W. Grundy & Son, F.R.I.B.A., architects and surveyors, Central-bldgs. Dep. £2 2s.

Warley. — Erection. — Of combined welfare centre and school clinic at Bleakhouse-rd., for Oldbury U.D.C. Surveyor, Municipal Bank-chambs. Dep. £2 2s.

JANUARY 22.

Blackpool.—Reconstruction.—Of premises in Castle Gate, South Shore, as workshops, etc., for Blackpool and Fylde Society for Blind. F. Wood, M.Inst.C.E., B.E. and S., Town Hall. Dep. £2.

Brighton.—Alterations.—To Corn Exchange and other buildings on Pavilion estate, for C.B. Jas. H. Rothwell, T.C., Town Hall. Dep. £5 5s.

Cardiff.—Post Office.—And telephone exchange, erection of, at Pontypridd, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Dublin.—Flats.—13, in Cook-st. area, for T.C. H. G. Simms, Housing Architect. Dep. £10 10s.

Elgin.—Alterations.—And adaptations at Norayhouse, for H.M.O.W. Architect, 122, George-st., Edinburgh, 2. Dep. £1 1s.

Halifax.—Houses.—26, in Ovenden Hall estate, for T.C. D. H. Lloyd Jones, B.E. Dep. £1 1s.

Lincoln.—Extension.—Of heating system at Dawber Sanatorium, Long Leys-rd., for T.C.. S. C. Baggott, City E. and S.

London.—Painting.—At Mount Pleasant post office, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, S.W.1. Dep. £1.

Mansfield.—Houses.—84, in various roads, for T.C. W. Thompson, B.E. and S. Dep. £2 2s.

Rugby.—Post Office.—And garage, erection of for H.M.O.W. Room 65D, Third Floor, H.M. of Works, S.W.1. Dep. £1.

Shrewsbury. — School. — At Racecourse-cres., for T.C. A. W. Ward, B.S.

Waterloo-with-Seaforth.—Fencing.—And artificial stonework at Bowersdale-pk., for U.D.C. J. R. Fothergill, E. and S. Dep. £1 1s.

JANUARY 23.

Reading.—Extension.—Of sorting office at head P.O., for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

JANUARY 24.

Glasgow.—Painting.—At Mossbank School Annexe, 13, Whitevale-st., for T.C. D. Stonhouse, T.C. Dep. £1 1s.

Haltwhistle.—Cottages.—Five at Castle Bank, for R.D.C. Oliver & Leeson, architects. 14, Ellison-place, Newcastle.

***Kent.**—Laundry.—And boiler house, erection of, and adaptations at Pembury Hospital, Pembury, for C.C. W. L. Platts, clerk, Sessions House, Maidstone. Dep. £5 5s.

Retford.—Alterations.—And additions to National Schools, Grove-st., for Managers. W. Southall, L.R.I.B.A., architect, Chapelgate. Dep. £2 2s.

Rochdale.—Houses.—220, on Bromrid estate; also construciton of roads and sewers, for T.C. S. H. Morgan, B.S. Dep. £2 2s.

JANUARY 25.

Birmingham.—Floors.—To gallery, single rooms, nurses's bedroom and other items at male 6 ward, ground floor, Winson Green Mental Hospital, Lodge-rd., for T.C. F. H. C. Wiltshire, clerk. Dep. £1 1s.

Callington.—Bungalow.—At Treovis, Upton Cross, for H. Rich. C. Truscott, F.I.A.A., architect, Downgate, Upton Cross.

Warrington.—Shelter.—At St. Elphin's-gardens, Manchester-rd., for T.C. B.S. Dep. 10s.

JANUARY 26.

***Willesden.**—Extensions.—To maternity hospital, Honeypot-lane, N.W.9, for B.C. F. Wilkinson, B.E., Town Hall, N.W.6. Dep. £10 10s.

JANUARY 27.

Crossford.—Houses.—20, for Fife C.C. Peter Reid, architect, Inverkeithing. Dep. £1 1s.

***Dover.**—House.—Erection of matron's house, porter's lodge and receiving ward at Public Assistance Institution, for Kent C.C. Clerk, Sessions House, Maidstone. Dep. £2 2s.

***Kent.**—Demolition of Chaplain's house at Maidstone, for C.C. W .H. Robinson, F.R.I.B.A., Council's Architect, Springfield, Maidstone.

***Rochester.**—Houses.—Erection, etc., of, on Smith-st. housing site, for T.C. W. Law, A.M.I.C.E., City Surveyor, Guildhall. Dep. £3 3s.

JANUARY 29.

Birmingham.—Installation.—Of complete system of electric lighting and power supply at Winson Green Mental Hospital, Lodge-rd., for T.C. H. H. Humphries, City E. and S. Dep. £2.

JANUARY 30.

***Cambridge.**—Houses, for Hundred Houses Society, Ltd. G. M. Johnson, secretary, 82a, Regent-st. Dep. £2 2s.

***High Wycombe.**—Post office and Sorting office, for H.M.O.W. Room 65d, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

JANUARY 31.

***Fareham.**—Casual wards and alterations, for Southampton C.C. Clerk, The Castle, Winchester. Dep. £1 1s.

***Lewes.**—Alterations to Post Office, for H.M.O.W. Room 65d, Third Floor, H.M. Office of Works, London. S.W.1. Dep. £1.

Sowerby Bridge.—Conveniences.—At Tuel-lane Council School, for West Riding C.C. H. E. Booth, Sowerby Bridge.

FEBRUARY 2.

Clitheroe.—Houses.—8, in 2 blocks of 4, on Holden-st. site, for T.C. F. W. Goodman, B.E and S. Dep. £2 2s.

London, E.C.1.—Extension.—To existing head office building and other contingent works at 173, Rosebery-av., for Metropolitan Water Board. G. F. Stringer, Clerk of the Board. Dep. £50.

FEBRUARY 3.

Barnsley.—Houses.—75 on three sites, for T.C. B.E.

FEBRUARY 5.

★**Cheshire.**—Schools.—New modern schools at Ellesmere Port (Grange Farm estate) for C.C. County Architect, The Castle. Dep. £2 2s.

Preston.—School.—At Fishwick, for C.B. W. Platt, B.E. and S. Dep. £1.

FEBRUARY 7.

★**Camberwell.**—Mess Room.—And store, erection of, at new cemetery, Honor Oak, for C.B. Town Clerk, 17, Camberwell Green. Dep. £3 3s.

FEBRUARY 10.

★**Hendon.**—Public conveniences at Hartley-av., N.W.7, and Station-rd., Edgware, for T.C. T.C. Dep. £2 2s.

NO DATE.

Blean.—Houses.—In Parish of Sturry, for R.D.C. F. A. Ward, S.

Cheltenham.—Demolition.—Of 6 5-story houses, Faneonberg-ter. L. W. Barnard & Partners, architects, 47, Promenade, Cheltenham. Dep. £2 2s.

Wakefield.—Extensions.—To central library, for T.C. P. Morris, architect, Town Hall.

MATERIALS, etc.

JANUARY 15.

Birkenhead.—Highway Materials.—For T.C. B. Robinson, B.E. and S.

Huntingdonshire.—Broken Granite.—For C.C. Acting County S., Huntingdon.

London.—Highway materials for Camberwell B.C. W. Bell, B.E. and S.

Preston.—Cubes.—4 in. granite cubes, for new road extension—North side of Dock, for Corporation of Preston—Ribble Navigation. A. H. Howarth, E.

JANUARY 16.

Hull.—Building Materials.—For T.C. J. N. Waite, City Electrical E.

Tottenham.—Road Materials, etc.—For U.D.C. E. Townson, clerk.

JANUARY 17.

Bradford.—Road Metal.—For T.C. W. Clarke, City E. and S.

Isle of Ely.—Road Materials.—For C.C. A. Morwood, C.S., March.

JANUARY 18.

Wembley.—Broken Granite.—For U.D.C. C. R. W. Chapman, E. and S.

JANUARY 20.

Blackburn.—Builder's Materials, etc.—For C.B. B.E.

Stockport. — Granite Setts. — For T.C. W. F. Gardner, B.S.

JANUARY 22.

Blackpool. — Highway Materials. — For C.B. Borough Treasurer.

Essex. — Highway Materials. — For C.C. C.S., Chelmsford.

Farnborough.—Tarred Slag.—For U.D.C. J. E. Hargreaves, E. and S.

Grimsby.—Broken Granite.—For R.D.C. J. B. Wikeley, E. and S.

Hornsey.—Shingle, etc.—For T.C. W. H. Adams, B.E. and S.

Willesden.—Road Materials.—For T.C. F. Wilkinson, B.E.

JANUARY 23.

Southall.—Granite.—For Southall and Norwood U.D.C. J. B. Thomson, E. and S.

JANUARY 24.

Gainsborough.—Road Materials.—For U.D.C. S. Algar, S.

Isle of Thanet.—Road Materials.—For R.D.C. G. L. Butterworth, S., Station-rd., Birchington.

Kingston-upon-Hull.—Lime, etc.—For T.C. H. Hamer, City E.

Liverpool.—Stoneware.—And tiles, for T.C. City Electrical E.

London.—Highway Materials.—For Chelsea B.C. J. A. Gough, B.S.

Stratford-upon-Avon. — Highway Materials.—For T.C. F. W. Jones, B.E.

JANUARY 25.

Gainsborough.—Road Materials.—For R.D.C. E. Donelly, S.

JANUARY 26.

Lindsey.—Refined Tar.—For C.C. C.S., Newland, Lincoln.

JANUARY 27.

Canterbury.—Granite Chippings.—For T.C. City E.

London.—Highway Materials.—For Paddington B.C. W. F. Abbiss, T.C.

Smethwick.—Bricks.—And cement, for T.C. R. Fletcher, B.E. and S.

Solihull.—Granite.—For U.D.C. R. Dunn, S.

Surrey.—Highway Materials.—For C.C. C.E., Kingston-on-Thames.

Yeovil.—Cement, etc.—For T.C. A. J. Price, B.S.

JANUARY 29.

London.—Highway materials. — For Bethnal Green B.C. A. E. Darby, B.E. and S.

Middlesex.—Tar.—For C.C. W. H. Morgan, C.E., Guildhall, S.W.1.

West Suffolk.—Highway Materials.—For C.C. E. H. Bond, C.S., Bury St. Edmunds.

JANUARY 30.

Bedford.—Highway Materials.—For T.C. C. H. Blakeway, B.E and S.

Dover.—Granite.—Also tar, etc., for T.C. W. Boulton Smith, B.E.

FEBRUARY 21.

London.—Highway Materials.—For Fulham B.C. W. Townsend, T.C.

ENGINEERING, IRON AND STEEL.

JANUARY 15.

Ipswich.—Water Tower.—Of ferro-concrete, for T.C. E. McLauchlan, B.E. Dep. £2 2s.

Middlesex.—Sewerage.—Contract No. S.22, for West Middlesex Main Sewerage, for C.C. Dodd & Watson, engineers, 3, Central-bldgs., Westminster, S.W.1.

Wisbech St. Mary.—Demolition.—Of existing brick arch bridge and construction of reinforced concrete single-span bridge over Northside Drain, for Isle of Ely C.C. A. Morwood, C.S., March. Dep. £3 3s.

JANUARY 16.

Cardiff.—Reconstruction.—And lengthening of two bridges under Radyr branch at Cowbridge-rd. and Waungron-rd., near Ely Station, for G.W.R. F. R. E. Davis, secretary, Paddington Station, London. Dep. £2 2s.

Castlebar.—Sewerage Scheme.—For U.D.C. N. O'Dwyer, B.E., Veritas House, Lower Abbey-st., Dublin. Dep. £5 5s.

JANUARY 17.

Belfast.—Structural Steelwork.—For T.C. City S.

Ramsey. — Pump House. — Steel framed, for Ramsey, Upwood and Gt. Raveley Drainage Board. O. Borer, E. to Board, "Elmhurst," Brooklands-av., Cambridge. Dep. £1.

JANUARY 20.

Halifax.—Steelwork.—For new pump room at electricity works, for C.B. D. T. Lloyd Jones, B.E., Crossley-st. Dep. £1 1s.

Melton.—Engineering Work.—At St. Audry's Hospital. E. G. Phillips, M.I.E.E., M.I.Mech.E., Queen's-chambs., High-st., Nottingham.

JANUARY 22.

Roxburgh.—Reservoir.—And two tanks in reinforced concrete, also pumphouse and other work at Ancrum, for C.C. Gilbert Thomson & Son, civil engineers, 164, Bath-st., Glasgow, C.2. Dep. £2 2s.

Runcorn.—Water Supply.—At Great Budworth, for R.D.C. J. O. Hunter, E. Dep. £3 3s.

JANUARY 26.

Belper.—Extensions.—Sewage pumping station, diversion of existing sewers, sludge beds at present disposal works, together with appurtenant works, in parish of Darley Abbey, for R.D.C. Sands & Walker, consulting engineers, Milton-chambs., Nottingham. Dep. £3 3s.

ROAD, SEWERAGE AND WATER WORKS.

JANUARY 15.

Bootle.—Paving.—And sewering in back street off Windsor-rd., for T.C. B.E. and S.

Brighton.—Laying.—About 4,026 yds. of main, for T.C. A. B. Cathcart, Waterworks E., 12, Bond-st. Dep. £2 2s.

Meriden.—Sewer.—About 377 lin. yds. and other works in Bellemere-rd., for R.D.C. H. Pickering. E. and S.

New Forest.—Making-up.—Of Lydlinch-rd., Totton, for R.D.C. District Surveyor, High-st., Lyndhurst. Dep. £2 2s.

JANUARY 16.

London (Southgate). — Making-up. — Of various roads in district, for T.C. R. Phillips, B.S. Dep. £2.

Prescot.—Making-up.—Of Sinclair-av., about 348 yds. long and 24 ft. wide overall, for U.D.C. F. A. Gregson, E. and S. Dep. £1.

Sutton.—Making-up.—Of various roads, for Sutton and Cheam U.D.C. W. Hedley Grieves, S. Dep. £1 1s.

JANUARY 17.

Bushey.—Sewer.—9-in. soil sewer, together with manholes and other contingent works, from Coldharbour-lane to Ashfield-av., for U.D.C. E. E. Ryder, E. and S.

Canvey Island.—Making-up.—Of Bardwyck-av., Holbeck-rd. and Holton-rd., for U.D.C. P. G. W. Stokes, E. and S. Dep. £1 1s.

JANUARY 18.

Kingsbury.—Sewer.—9-in. soil sewer, approx. length 540 yds., and 9-in., 12-in. and 15-in. concrete surface water sewer, approx. length 540 yds., in Salmon-st., for U.D.C. R. C. N. Newport, E. and S. Dep. £2 2s.

The finest Paint for inside or outside work.
GRIFFITHS BROS. & CO. LONDON LTD
Macks Road, Bermondsey, S.E.16
'PHONE. BER: 1151

London.—Sewers.—About 540 yds. in Salmon-st., Kingsbury, for U.D.C. R. C. N. Newport, E. and S. Dep. £2 2s.

JANUARY 19.

Manchester.—Footpaths.—Of concrete flags in Yew Tree-lane, Northenden, between Rack House-rd. and Sale-rd., for T.C. S. Dep. £1 1s.

JANUARY 20.

Halifax.—Improvement Works.—In Linden-rd., Clifton-rd., Bath-rd., Heath-gdns., and adjoining streets, for T.C. D. T. Lloyd Jones, B.E. Dep. £1 1s.

Romford. — Making-up. — Of various roads, for U.D.C. F. G. Beaumont, E. and S. Dep. £1 1s.

JANUARY 22.

Beddington and Wallington.—Making-up.—Of Bandon-rise, Farm-lane (part), and The Ridge (part), for U.D.C. S. F. R. Carter, E. and S. Dep. £1 1s. each.

Benfleet.—Making-up.—Of various roads at Hadleigh, for U.D.C. S. Dep. £2 2s.

Berwick-upon-Tweed.—Sewer.—From North-rd. to the sea, for T.C. J. & A. Leslie and Reid, civil engineers, 72a, George-st., Edinburgh. Dep. £1.

Chelmsford.—Sewers.—Diversion of outfall sewer, Baddow-rd., for T.C. B.E. Dep. £2 2s.

East Grinstead.—Reconstruction.—Of soil sewer in Queen's-rd., for U.D.C. E. and S.

Finchley.—Making-up.—Of North-cres., Southcres., St. Margarets-av., Naylor-rd. (2nd portion), Birley-rd. (2nd portion), Grosvenor-rd. (2nd portion), Gordon-rd. (2nd portion), Allandale-av., for T.C. P. T. Harrison, B.E. and S., 9, The Hawthorns, Regent's Park-rd., Finchley, N.3.

Hull.—Surfacing.—And sewer works at coach station and adjoining streets, for T.C. City E. Dep. £2.

Isle of Wight.—Water Supply.—At Shalfleet, for R.D.C. R. Acheson Webb, consulting engineer, Yarmouth, I.W.

Maldon.—Water Supply.—At Purleigh, for R.D.C. W. Almond, E., 6, Market Hill.

Mitcham.—Widening, etc.—And improvement of Lock's-lane, for U.D.C. S.

Willesden.—Paving.—30,000 yds. super of 2-in. artificial stone paving in various roads, for T.C. F. Wilkinson, B.E. Dep. £10 10s.

JANUARY 23.

Birmingham.—Road.—Construction in grounds of Selly Oak Hospital, for T.C. J. Preston, steward, Selly Oak Hospital.

Felixstowe.—Making-up.—Of part of Princes-rd., for U.D.C. E. and S.

JANUARY 24.

London.—Paving.—Of Holmesley-rd., Forest Hill; Linchmere-rd. and Helder-gr., Lee, for Lewisham B.C. J. W. Shuter, T.C.

JANUARY 25.

Macclesfield.—Mains.—840 yds. lin. of 4-in. cast-iron water mains, etc., at Hurdsfield, for R.D.C. J. H. Walters, E., Moody-chambs., Congleton. Dep. £2 2s.

Romford.—Making-up.—Of The Avenue, for U.D.C. F. G. Beaumont, E. and S. Dep. £1 1s.

JANUARY 26.

Newcastle-under-Lyme.—Reconstruction.—Taking up of existing setts, tramrails, etc., reconstructing with concrete and resurfacing with two-coat asphalt at Ironmarket, for T.C. A. Cotton, B.E. and S. Dep. £2 2s.

JANUARY 27.

Dartford.—Making-up.—Of Tile Kiln-lane and Summerhouse-drive, for T.C. B.S. Dep. £2 2s.

Hyde.—Roadway.—To Bank-st., for T.C. B.S.

FEBRUARY 5.

★**Battersea.**—Highway Materials, for B.C. Town Clerk, S.W.11.

FEBRUARY 7.

Swansea.—Drainage.—12,108 yds. of sewer, together with manholes and other appurtenant works in connection with sewerage of Clyne Valley, Dunyant, Killay, and Derwen Fawr districts of Swansea, for C.B. J. R. Heath, Chief E. Dep. £5 5s.

Public Appointment.

JANUARY 15.

Chester.—Clerk of Works.—Geoffrey C. Scrimgeour, Clerk, County Offices, Northgate-st.

Dublin.—Consulting Architect to Joint Committee of Grangegorman Mental Hospital. Secretary, 45, Upper O'Connell-st.

JANUARY 20.

★**Eastbourne.** — Architectural Assistant. — For C.B. Leslie Roseveare, M.Inst.C.E., B.E., Town Hall.

JANUARY 22.

Enfield, Middlesex. — Storekeeper at Enfield Highway Depôt, Hertford-rd. For U.D.C. Kenneth Tansley, clerk, Public Offices.

★**Finsbury.**—Staff Painter. For T.C. D. E. Richards, Town Clerk, Rosebery-av., E.C.1.

JANUARY 25.

★**Manchester.**—Architectural Assistant (Temporary).—For T.C. Town Clerk, Housing Director, Town Hall.

JANUARY 29.

★**Manchester.**—Assistant in the Town Planning and Buildings Dept. For T.C. City Architect, Town Hall.

★**Manchester.**—District Building Inspector, in Town Planning and Buildings Dept., by T.C. City Architect, Town Hall.

CURRENT & PROPOSED BUILDING WORK*

Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Alnwick.—Houses to be built at Dunterns, by U.D.C.

Ashington.—M.H. sanctioned 25 houses for aged people by U.D.C. No contracts let. Plans by G. Beaty.

Atherton.—Stothers, Ltd., North-rd., proposing extensions to works. Plans by Cruickshank & Seward, FF.R.I.B.A., architects, 18, Booth-st., Manchester. No contracts.

Bangor.—City Council decided to build workmen's dwellings facing Snowdonian Grange.

Bardney.—A. W. Foster & Co., of Lincoln, to erect canning factory.

Batley.—T.C. propose 142 houses in connection with slum clearance scheme.

Bedale.—R.D.C. to erect 38 houses.

Bedlington.—U.D.C. submitted 5-year plan of housing for consideration of M.H. Plans include proposals for demolition of slum areas at Guide Post, Choppington, Bedlington East End, Bedlington Station and Bedlington Bank Top, and erection of further 400 houses.

Belfast.—Corporation approved of street plans in connection with development of estates in four districts, largest being that of Thomas M'Kee & Sons for site off Knockbreda-rd., where it is proposed to erect about 300 semi-detached villas. Site belonged to John Colgan, auctioneer.—Letter submitted to Belfast Tramway Committee from Northern Ministry of Home Affairs approving of borrowing £8,000 to meet corporation's portion of cost of laying out lands at Bellevue as zoological gardens.

Belper.—Plans being prepared for reconstruction of Fleet Boys' school.

Birmingham.—City Council recommend purchase at £1,750 of land in Lakey-lane, Hall Green, as a site for public elementary school.—Estates Committee to sell to authorities of Roman Catholic Church land at corner of Gregory-av. and Prestwood-rd. on Weoley Hill estate for church and school.—M.H. sanctioned £73,000 to cover building new Central police station.—H. W. Hobbise, F.R.I.B.A., 33, Newhall-st., architect for licensed premises, etc., Glebe Farm-rd., and Kitts Green-rd., Stechford, for Ansell's Brewery, Ltd., Park Brewery.

Blackwell.—R.D.C. propose 50 houses for aged persons and 20 additional houses on Hill Crest estate, Shirebrook, near Mansfield. Plans by H. Tatham Sudbury, architect, Rutland-chams., Ilkeston.

Blackpool.—Corporation resolved that Church-st. conveniences be reconstructed and that B.S. and Director of Public Cleansing be instructed to prepare scheme.—Council resolved that density plan submitted by H. Best, on behalf of Warbreck Building Co. in connection with West View estate, Bispham, be approved.—Borough Electrical Engineer is to utilise site at rear of sewage pumping station in Ansdell-rd. for sub-station.—Application is to be made to M.H. for sanction to borrowing further £32,464 in respect of new highway depot.—Parks Committee resolved that amended scheme submitted by Superintendent in connection with proposed golf clubhouse at Stanley-pk. on site approved by General Purposes Committee be approved.—Subject to approval of B. of E. and M.H., the E.C. to proceed immediately with first half of scheme for technical college.—Parks Superintendent been instructed to carry out provision of rockery and fencing on grass slopes on Middle Walk Promenade.—Plans passed: House and public garage, Devonshire-rd. and Warley-rd., T. Holford; 9 houses and shops, Highfield-rd., and 5 houses and 2 lock-up shops, Acre-gate, Hitchen & Bairstow; 24 houses, off St. Annes-rd., Hodgson & Whittaker; church, Grasmere-rd and Lune-grove, Methodist Church Trustees; additions, club premises, Talbot-rd., J. W. Dewhurst; additions to school, St. Joseph's College, Newton-drive, The Christian Brothers.

Blaydon.—Durham C.C. to build garage. Plans by W. J. Merrett, C.S., Durham.

Bloxwich.—Staffordshire Territorial Army Association informed Organisation Committee that War Office approved purchase of site in Summerfield-rd. for drill hall.

Blyth.—J. W. Parsons & Sons, 11, Waterloo-rd., to invite tenders for flats, Claremont-ter.—L. Leeper, B.E., prepared lay-out plan for shops proposed to be built by T.C. on Broadway Circle.—Newcastle Breweries, Ltd., Haymarket, Newcastle, to rebuild "Queen's Head" hotel, King-st. Plans by J. Oswald & Sons, 2, Worswick-st., Newcastle. No contracts.—W. G. Townsend Gray, of C.W.S. Architects' Dept., 90, Westmorland-rd., Newcastle-on-Tyne, prepared plans for alterations to premises, Aldborough-st. No contracts placed.—T.C. negotiating for purchase of land in Crawford-st., for housing purposes.—T.C. approved slum clearance work at about £487,000. 800 houses are to go.

*See also List of Contracts Open.

**** In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.**

Bolton.—Diocesan Building Committee propose to acquire land at Crompton Way for church, school and vicarage.—Deane Parish Church P.C. propose parochial hall.

Bootle.—Council approved several recommendations of Housing and Town Planning Committee relating to Miller's Bridge improvement area and Pleasant-view slum clearance area, where plans been submitted for 111 houses.—Application made for £2,382 for roads and sewers at site in Marsh-lane, where 60 houses to be erected.

Bournemouth.—M.H. held inquiries into T.C.'s application to borrow £70,261 on construction and equipment of pavilion, and £22,131 for proposed enlargement of stage and other alterations.—T.C. approved of scheme for extension of Russell-Cotes Art Gallery and Museum at £6,000. B.E. instructed to prepare drawings.

Bradford.—Corporation Health Committee recommended that City Architect, J. A. Fletcher, prepare plans for hostel for 170 nurses at St. Luke's Hospital.

Brighouse.—Industrial Co-operative Society, Ltd., to erect shops and offices at King-st. Tenders invited.—T.C. approved.—Hudson Brook, 26 semi-detached houses, Granny Hall-lane and off Halifax-rd.

Bristol.—In connection with widening of Hotwell-rd. and improvement of Eugene-st. area, St. James'. 223 persons displaced. To meet obligation, City Council to consider 44 non-parlour type houses on Knowle estate at £12,364, and 12 flats in two-story buildings at Knowle for £2,208.

Buxton.—T.C. approved: Premises, Spring-gdns., Marks & Spencer's, Ltd.

Caldbeck.—Trustees of John Peel Memorial propose memorial public shelter at £300.

Cannock.—U.D.C. acquired "Halingdene," Penkridge, for conversion into council offices. Plans by Col. H. M. Whitehead, E.

Chelmsford.—T.C. approved:—The Hoffmann Manufacturing Co., Ltd., extensions to "B." factory, Bishop's Hall-lane; Hoffmann Manufacturing Co., Ltd., extensions to "C" factory, Rectory-lane.

Chepstow.—Site at St. Tecla, near Bulwark, been selected by U.D.C. for 50 houses under slum clearance scheme.

Chesterfield.—More than £2,000 been raised for Parish Church Tower Restoration Fund. Repair to wall of south clerestory to be put in hand.—Plan for lay-out of land between Highfield-lane and St. John's-rd., from Chatsworth Estates Co., provisionally approved by T.C.—Erection of electricity showrooms in Holywell-st. Cost £7,978.

Cirencester.—U.D.C. to erect 50 houses on Bowling Green-lane site.

Colwyn Bay.—Council approved recommendations to apply for sanction to borrow £14,000 for improvement works in connection with health, housing, highways, and electricity.—Council decided to invite tenders for boating lake and boathouse at Eirias-pk.

Corby.—Northants E.C. approved £31,500 on provision of elementary school at Corby. School will provide accommodation for 600 children.

Coventry.—City Council adopted recommendation that Sandy-lane and Old Church-rd. bridges be improved at £16,700, subject to grant.

Coventry.—T.C. approved:—factory, Parkside, A. Davies & Sons, Ltd.; 16 houses, Ansty-rd., 24 houses, Arterial-rd., and 73 houses, Farren-rd., T. Dalton; sub-station, Wall Hill-rd., opposite Hawkes Mill-lane, Corporation; sub-station, Marlborough-rd., Corporation; 23 houses, Roland-av., A. E. Gilks; sub-station, off Cross-rd., Alfred Herbert, Ltd.; assembly hall, corner of Three Spires-av. and Poole-rd., Coventry & District Co-operative Society, Ltd.; sub-station, Stoke Green, Corporation.

Dalton.—Plans prepared by S. to U.D.C. for lay-out of 24 houses in Croft-gardens. No contracts.

Darfield.—U.D.C. approved scheme of slum clearance involving 96 houses.

Darlaston.—U.D.C. propose two swimming baths, etc., for children. Plans by J. C. Joynson, S.

Darlington.—T.C. to be asked to approve plans for rehousing of 598 individuals living in houses scheduled for demolition, at £54,828.—T.C. approved.—Kitching & Co., for L. W. Evans, 20 houses, Salters-gate.

Dawley.—Sanction of Ministry to raising loans for 26 houses at Malin's Lee received by U.D.C.

Dawlish.—Plans for pavilion to be erected on Lawn, with seating capacity of 500, and estimated to cost £8,000, been presented to U.D.C. by F. S. C. Churchward, S. Application to be made to M.H. for sanction to loan.

Derby.—Corporation Special Housing Committee recommend 256 one-bedroom, 314 two-bedroom, 225 three-bedroom, and 91 four-bedroom houses on sites belonging to Corporation.—Leys Malleable Castings Co. acquired site for extensions, and Qualcast, Ltd., to build new workshop.

Dewsbury.—Corporation propose electricity sub-station at Vulcan-rd. Tenders to be invited.

Doncaster.—Formal consent of M.H. to appropriation of land at Wheatley Park for public elementary school been approved.—Tenders to be invited for public convenience at East Laith Gate.

Dudley.—B.E. to prepare plans for shopping centre, corner of King-st. and New Mills-st.—It was decided, at suggestion of Governors of Dudley Technical College and subject to approval of Staffordshire C.C. and B. of E., to proceed with assembly hall at Technical College at £7,500.

Durham.—Ebchester Hall to be taken over by Roman Catholics and converted into school.

East Ham.—C.B. approved: 20 houses, 44-46, and 138-152, Landseer-av., J. W. Lohden; 15 houses, 190-218, Walton-rd., A. G. Mills, architect.

Elham.—District Council provisionally approved scheme for smallpox hospital. Scheme for extension of hospital at Poulton, Dover, considered. Estimated cost £3,550.

Fishburn.—Scheme for local branch extension been approved by members of St. Catherine's Church. Rev. Lord Thurlow is Rector of Sedgefield-with-Fishburn.

Gillingham.—Plans passed: 33 houses, Dial-rd., D. S. Pierson.

Gloucester.—City Council approved proposals by private company to build open-air bath, with an adjoining arena for tennis, boating and athletics, at Barnwood.—T.C. approved.—factory, Magdala-rd., Gloucester Shirt Co., Ltd.

Halifax.—E.C. recommend public elementary school in Ovenden area to accommodate 480 children.—Plans approved:—Fred Stocks, new street and lay-out for 34 houses in Mayfield-av.; 10 houses, bottom of Chester-rd. and Old-lane, J. H. Horton.—B.E. to invite tenders for 26 houses on Ovenden Hall estate, subject to approval of M.H.—Yorkshire Penny Bank propose offices in Water-house-st.

Haverfordwest.—R.D.C. to apply to M.H. for sanction to build 100 houses during next five years.

Hebburn.—Governors of Hebburn Hall Accident Infirmary have decided to build a £4,000 maternity home.

Hebburn-on-Tyne.—U.D.C. propose 50 houses. Tenders being invited. T. A. Page & Son, architects, King-st., South Shields.

Hendon.—R.D.C. approved: 15 houses, Tenby-av., and 8 at Ivanhoe-drive, Harrow Weald, Hart & Hardaker, Ltd.; 11 houses, Wynlie-av., and 7 at Rickmansworth-rd., Pinner, W. H. Allkins; 68 houses, Brampton-grove, Harrow Weald, H. Lloyd.

Kettering.—Plans passed: United Counties Omnibus Co., Ltd., garage for 100 buses, Northampton rd.—Stewarts & Lloyds propose to build 800 houses at Corby. Laurence M. Gotch, architect, asked R.D.C. for approval of scheme, and asked them to forward it to M.H. for their approval and for a guarantee of advances.

Keynsham.—Recommendation that senior Council school should be built at £15,000 contained in minutes of Somerset C.C.

Kibblesworth.—Application made by Durham County E.C. for sanction to build school to replace the existing school. Plans by F. Willey, County Architect, 34, Old Elvet, Durham.

Kidderminster.—F. Holt, architect, 14, Dale-st., Liverpool, prepared plans for refreshment house, pump room and swimming pool and factory at Paulerspury for Paulers, Ltd.

Kingsbury.—Council approved:—Proposed showrooms and offices, Northmet Electric Power Supply Co.; 14 pairs of flats, Old Church-lane, T. W. Heath & Co., Ltd.; 15 pairs of flats, Highfield-ave., Kingsbury Cross Co-Partnership; 38 houses, Salmon-st., Salmon Estate (Kingsbury), Ltd.; 35 houses, Lavender-av., Salmon-st. and junction of Dunster-drive and Glenwood-grove, Salmon Estates (Kingsbury), Ltd.

Lancaster.—F. Hill to prepare plans for reconstruction of "Albert Inn" in King-st.—T.C. approved plans for offices in South-rd. for Royal Lancaster Infirmary.—J. Parkinson & Co., builders, Parliament-st., acquired Lune Villa estate, Torrisholme-rd., Owen-rd., Slyne-rd., Old Morecambe-rd., which they propose to develop for houses. Plans approved for 96 semi-detached houses.

Leyton.—T.C. approved:—W. H. Smith & Son, Ltd., alterations 468, Hoe-st.; F. R. Hall, Ltd., alterations and additions at 567, 569 and 571, Lea Bridge-rd.

Leamington Spa.—Plans for 22 houses approved for Claremont House site. Building site disposed through agency of Cookes & Southorn.

Leeds.—Tenders being invited for rebuilding business premises in New Briggate for —. Wilson. Plans by Chorley, Gribbon & Foggitt, Park-place.—Town Planning and Improvements Committee of City Council recommend compulsory acquisition of land at Belle Isle-rd. and Middleton-rd. for housing purposes.

Leicestershire.—E.C. to consider erection of central council school for Earl Shilton and Barwell.

Liverpool.—Plans passed by Corporation:—addition to factory, Dauro-pl., G. Frazer, for Paton, Calvert & Co., Ltd.; alteration and addition to Blue Coat Hospital, Church-rd., Wavertree, Briggs & Thornely, architects; factory, Cheviot-rd.; J. H. Riding; 106 houses, Rudyard-rd., and 4 houses, Thomas-lane, A. E. Shennan, for District Estates, Ltd.; extension of hall, India Buildings, Water-st., E. H. Sawyer, for India Buildings, Ltd.; 8 houses and shops, Oakhill-rd., Gray & Evans, for Park Estates (Liverpool), Ltd.; 24 houses, Almonds Green, and 14 houses, Beech Green, W. T. Clarke, for T. Percy, Ltd.; 26 houses, Crosby-green, and 14 houses in New-rd., off Crosby Green, J. R. Ruddock; club premises, New Hall-lane, Clubmoor, H. A. N. Woodall & A. Asbridge, for Clubmoor Veterans' Association; alteration, Great Homer-st., W. A. Lowry, for

Liverpool Methodist Mission; 30 houses, Kingscourt-rd., W. Tickle, for Kingscourt Building Co.; alteration to Ancient Chapel of Toxteth, Park-rd., Shepheard & Bower, for Committee; addition to works, Beech-st., R. Mainwaring & Son, for Tavener, Rutledge & Co., Ltd.; electric substation, Outer Circle-rd., Finch House estate, for Corporation; 20 houses, Valescourt-rd., W. Tickle, for Williams & Edwards; 36 houses, Childwall-rd., and 4 houses, Abbeystead-rd., Harold C. Davies, for Pierce, Williams & Son; 24 houses, Melling-rd., O. Williams & Sutcliffe, for Sefton Building Co., Ltd.; 28 tenements, Eldon-st., Corporation; reconstruction after fire, 60-62, Soho-st., Wm. Macdonald, for Siddall & Hilton, Ltd.

Llandudno.—Plans of privately promoted scheme for bathing pool on North Shore promenade been submitted for consideration by Council. Plans by Catlin's Arcadia Co.

London (St. Marylebone).—B.C. approved application by R. W. Barton for building line in Hallam-st.

London (Westminster).—T. H. F. Burditt, architect for Grosvenor-sq., Ltd., 42a, Chepstow-villas, W.11, for additions to tank room on flat roof over seventh story of building, 19-21, Grosvenor-sq., W.1.

Lytham.—M.H. held inquiry into application by Corporation to borrow £15,000 for children's paddling-pool over two acres in extent and miniature golf course on front at St. Annes.

Manchester.—Parks Committee propose conveniences, open air bath, Alexandra Park, £300.—Health Committee propose sanitary blocks at Withington Institution and Crumpsall Hospital, at £1,500.—T.C. propose extension of Queen's-rd. 'bus garage, at £18,000.—E.C. approved final plans for Haverley Hey junior mixed and infants' school, Withington, with accommodation for 890 scholars. Quantities to be prepared.—Plans approved for extensions of Baguley Sanatorium.—Libraries Committee to erect branch library on Burnage Estate.—Wilson's Brewery, Ltd., Monsall-rd., Newton Heath, propose licenced premises at Yew Tree-lane, Northenden.—Plans approved for Royal Oak Hotel at Wythenshawe for Wilson's Brewery Co., Ltd. C. W. Highfield, architect, Brewery Offices.—Public Health Committee propose at Withington Hospital additional nurses' accommodation, at £2,000.—Additional accommodation at open-air school on Rose Hill Convalescent Home, at £374; alterations to hospital ward and extensions of pathological laboratory at Crumpsall Hospital, at £2,225; cottages for staff at Booth Hall Hospital, at £1,700.—Plans on view of new £35,000 Roman Catholic church, Livesey-st. Plans by Mr. Greenhalgh, architect, Bolton. It will accommodate 1,300 people.

March.—U.D.C. approved plans for church hall, Station-rd., for St. John's Church Trustees.

Melksham.—U.D.C. approved lay-out plan for further 40 houses on Spa-rd. estate.—Surveyor produced plans for extension to Avon India Rubber Co.'s factory and Council recommended adoption.

Middlesbrough.—E. T. Sweeting, builder, Back Haymore-st., Linthorpe, to develop estate near Acklam Hall, by 96 houses. Plans by Kitching & Co., 26, Albert-rd.—W. A. King & Sons, builders, Westbourne-grove, North Ormesby, propose developing estate in Green-lane by erection of 114 semi-detached houses. Plans by Kitching & Co., Ltd., 26, Albert-rd.—Plans for branch library on Burgess, B.E. Cost £3,000. Tenders not yet invited.

Mirfield.—Council to schedule 50 houses for demolition.

Nantwich.—U.D.C. decided to adopt scheme for open-air swimming bath in Manor-rd., at £5,000.

Newcastle-on-Tyne.—City Housing Committee considering proposal to lease to Haig Homes' Association land on Ferguson-lane estate for 25 houses for ex-Servicemen.—Co-operative Society propose branch premises in Armstrong-rd. Plans by C.W.S., Architect's Dept., 90, Westmoreland-rd. No contract let.—Robson & Co., builders, Langley-rd., to build 22 houses in Edendale-rd.—Plans submitted to Town Improvement and Streets Committee been approved for 164 new dwellings. 130 are projected by W. Leech in Walker district.

Newcastle (Staffs).—Housing and Building Committee of T.C. recommended adoption of plan by S. A. Wilmot, showing proposed lay-out of land at Ashfields and West Brampton, and suggested that, in dealing with development of land at West Brampton, consideration should be given to provision of site for school.

Northampton.—Trustees of Free Church propose church at Duston.

Northwich.—Application to be made to M.H. for approval of further 46 houses on site.

Ormskirk.—Council to purchase site in Scarisbrick-st. for rehousing under slum clearance scheme.

Orpington.—Parish Council recommended Bromley R.D.C. to pass following plans: 19 pairs houses, Northfield Hall estate, C. E. Barnes; 6 pairs and 3 pairs of semi-bungalows, Elm-grove and Oakhill-rd., S. Knox; 10 pairs of houses, Lancing-rd., Blatcher & Turner, Ltd.; additions to "Royal Albert" Inn, Lower-rd., Dartford Brewery Co., Ltd.

Oxford.—Town Planning sub-Committee recommend plan submitted by G. T. Gardner, on behalf of N. Moss & Son, Ltd., for lay-out of Florence-pk. estate.

Pembroke.—Arrangements made by syndicate for development of estate known as Observatory Hall, Hakin, near Pembroke. 400 houses proposed. Architect, D. Glyn Williams, Fisher-st., Swansea.

Plomesgate.—Application been made by R.D.C. to M.H. for loan of £1,500 for water supply to Cransford Village. Invitations given to contractors to submit tenders for bore well as preliminary before main contract. Particulars from W. C. Morgan, E. and S.

Plymouth.—T.C. to apply to M.H. to borrow £7,700 for adapting offices vacated by C.C.—Revised plan for baths and wash-houses, Hoegate-st., to be submitted to M.H. for approval. Estimate £4,500.—Parks and Recreation Committee approved of City Architect's plan for pavilion at bowling greens, Central Park, at £750.

Preston.—Lancashire P.A.C. propose nurses' home at Institute, Green-lane, Patricroft, near Manchester. Plans by County Architect, Stephen Wilkinson, F.R.I.B.A., 16, Ribblesdale-place, Preston. Cost £13,750.

Rawtenstall.—Corporation received sanction from M.H. for borrowing of £14,447 to erect 50 houses for aged persons.—T.C. approved:—lay-out plan for 50 houses, Lane End Farm, Waterfoot, Abel Heap.

Retford.—Tenders to be invited next month for reconstruction of East Retford Church Schools. Architect, W. Southall, L.R.I.B.A., Chapel-gate.

Rhayader.—R.D.C. propose bridge over Dolfalle Ford.

Rochester.—Plans passed.—showrooms, offices and garage, High-st., for Rochester, Chatham and Gillingham Gas Co.

Romford.—R.D.C. approved plans by S., for 48 houses at Rainham.

Rothwell.—Co-operative Society is to build 20 houses. U.D.C. approved plan showing lay-out of houses in new street parallel to Kingsley-rd.

Rugby.—T.C. approved commercial garage and filling station corner of Moyeady-av. and Rugby-rd., for B. T. Rushall.

Salford.—T.C. applying for sanction to borrow £116,000 for rehousing scheme.

Seghill.—U.D.C. to build 40 houses by contract. Plans by S.

Selby.—U.D.C. to write to M.H. inquiring whether they would sanction loan for building houses to let.

Sheerness.—U.D.C. proposing 36 houses.

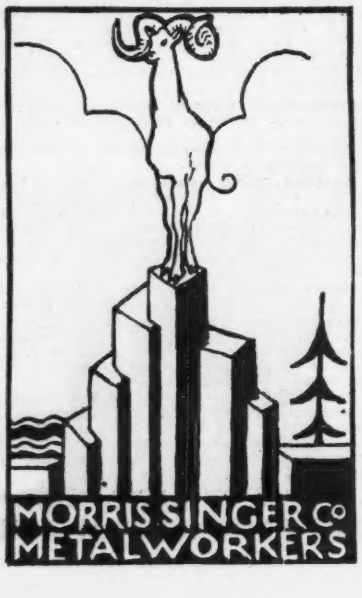
Sheffield.—T.C. propose to acquire land off City-rd. and Heeley Park-rd. for council houses.—Parks Committee propose extensions to Weston Park Museum. Plans by City Architect.—Fowler & Marshall, surveyors, 3, Hartshead, prepared plans for shopping centre on Triangle estate, Handsworth.—Brightside & Carbrook Co-operative Society, Ltd., acquired site, Paper Mill-rd. shopping centre, for a branch stores.—T.C. approved:—316 houses, Wybourn estate (scheme 9), Estates Committee; 36 houses, Marsh-av. and Warminster-rd., J. Marsh; one house, factory and offices, Little London-rd., R. J. Stokes & Co., Ltd.; house, offices, workshops and stores, Sheffield-rd., Tinsley, Tinsley Wire Industries, Ltd.; 54 houses, Woodthorpe Arms estate, J. H. Naylor & Son.

Tenders for Sub-contracts.

Building trade sub-contracts are required for individual trades, with a following of at least 50 men per trade. Applications should be made to Messrs. Morrell (Builders), Ltd., Coney Hall Estate, Hayes, Kent; 'phone Springpark 2095.

Estate Development at Hereford.

Messrs. Alastair Maclennan and Co., Civil Engineering Contractors, Thames House, Millbank, London, S.W.1, are almost immediately to commence to develop a building estate which they have acquired in the city of Hereford. The first stage in the scheme is the building of 90 houses. The estate and building plans have been passed by the Town Planning Committee of the Corporation, and the company are open to receive offers from manufacturers who may be in a position to submit competitive prices for supplying materials in that district. The company are also willing to consider sub-letting certain of the trades.



TRADE NEWS

A Centenary.

One of the few remaining British manufacturing firms which is still controlled by the direct descendants of the founder has just celebrated its centenary. This is the firm of John Oakey & Sons, Ltd., makers of abrasives and polishes, which was founded in 1833 by John Oakey, and, now a limited company, is controlled by his grandsons and their relatives and has two great-grandsons on the staff. Started as a one-man business for manufacturing glass paper for cabinet-makers, the firm, whose offices and works are at Wellington Mills, Westminster Bridge-road, S.E.1, now has a world-wide reputation and trade in abrasives and polishes and employs a large staff.

Paint Sales Conference.

The sales conference of Messrs. Blundell, Spence and Co., Ltd., was held in Hull on December 28 and 29, and proved to be the most successful meeting yet held by the company. The firm's representatives gathered together from all parts on the afternoon of the 28th at the Grosvenor Hotel, Hull, and in the evening a staff social and dance was held at the hotel, at which over 200 of the staff and their friends were present. The following morning a tour was made of the extensive works of the company at Bankside, after which the representatives reassembled at the hotel for luncheon under the chairmanship of Colonel F. B. Moss Blundell, C.M.G., D.S.O. (the company's vice-chairman). Mr. A. W. Pocock, of Bournemouth, on behalf of his colleagues "on the road," expressed their thanks to the management, and Colonel Moss Blundell, responding, said that at Bankside they had a modern factory and a progressive management, and he thought they could look forward with some measure of confidence to a good following year.

A Celebration Dinner.

A celebration dinner was given recently by the directors of Messrs. Sharp Bros. and Knight, Ltd., to the employees on the occasion of the 70th birthday of the founder and senior director, Mr. John T. Sharp. Over 300 employees and guests sat down to dinner. There were presentations of 16 long-service certificates to men with 30 or more years' connection with the firm. Mr. John T. Sharp introduced the Mayor and said how honoured he felt at his presence. The presentations were made by the Mayor (Councillor W. Hutson, J.P.), who told how the firm had grown since it was founded 46 years ago. He remembered the arrival of the firm when it first opened premises in Russell-street during the jubilee year of Queen Victoria's reign. In 1913 the development continued with the acquisition of premises from Messrs. Buxton and Thornley, and since then it had progressed to the present organisation, due to the appreciation of the firm's joinery manufactures.

Mr. R. Streather, of Messrs. Robert Streather and Sons (Sutton Coldfield), who proposed the health of Mr. John T. Sharp, said that Burton was fortunate to have such a man, who valued his operatives as they also valued him. He had been president of the English Joinery Manufacturers' Association for eight years, and was looked upon as one of the best joinery manufacturers in England.

A Calendar.

A wall calendar, in excellent taste, has reached us from the Steel Scaffolding Co., Ltd., of 80, Regent-street, W.1. This shows a view of the Clock Tower of the Houses of Parliament, and, underneath, the score of the Westminster Chimes. It will be remembered that the Steel Scaffolding Company have supplied the "Bettaskaf" steel scaffolding which is in use on the restoration of the Houses of Parliament—which has been admired by many passers-by, both laymen and those connected with building. We understand that a copy of this very pleasant calendar will be sent to any of our readers upon application.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by enquiry

BRICKS, &c.

Ex 1,000 Alongside, in River Thames up to Mortlake

	£ s. d.
Best Stocks	4 2 0
Second Hard Stocks	3 10 0

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
"Phorpres"	2 11 3	Flettons, B'll'n'se Best Blue	3 6 3
Flettons at King's Cross	2 11 3	Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Do. Bullnose	9 15 0
White Midhurst Facing Bricks (delivered London site)		Blue Wire Cuts	7 5 0
			5 0 0
"Phorpres" Whites (do.)			3 17 3
"Phorpres" Rustic Facing Bricks, delivered Central London		per 1,000	3 12 3
Best Stourbridge Fire Brick:—			
2½ in.	8 11 0	3 in.	10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
Headers	20 10 0	One side and two Ends	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two sides and one End	31 10 0
		Splays and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

CLINKER CONCRETE.

2" per yd. sup.	1 6	3" per yd. sup.	2 0
2½ " "	1 8	4" "	2 4

CRANHAM TERRA COTTA.

2" per yd. sup.	3 0	3" per yd. sup.	3 8
2½ " "	3 6	4" "	4 7

HEMPSTEAD—KEYED TWO SIDES.

2" per yd. sup.	3 3	3" per yd. sup.	3 9
2½ " "	3 6	4" "	4 3

	s. d.	
Thames Ballast	7 3	per yd.
Pit Ballast	6 3	" "
Pit Sand	7 9	" "
Washed Sand	8 3	" "
¾ in. Shingle	7 3	" "
¾ in. Broken Brick	11 3	" "
Pan Breeze	8 3	" "

} delivered 2 miles radius Paddington.

CEMENT.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test	
In Jute Sacks (11 to ton)	£2 4 9
In Paper Bags (20 to ton)	2 6 0

Colorcrete No. 1 & 2 Coloured Rapid Hardening Portland Cement in 1 cwt. paper bags free (non-returnable) 20/- per ton above Portland Cement Price.

"Snowcrete" White Portland Cement in 1 cwt. paper bags free (non-returnable) 175/- per ton.

Alongside Vauxhall in 80 Ton Lots.

Jute Sacks (11 to ton)	1 17 9
Paper bags (20 to ton)	1 19 0
Ferrocrete per ton extra on above	0 7 6
Vitrocrete per ton extra on above	0 7 6

NOTE.—Jute Sacks are charged 1s. 6d. each and credited 1s. 6d. each nett if returned in good condition within three months, carriage paid.

Super Cement (Waterproof) Paper Bags free	3 16 0
Roman Cement	6 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" Pink	5 10 0

PLASTER.

Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	4 12 0
Sirapite, Coarse	2 9 0
" Finish	3 17 0
Grey Stone Lime	2 5 0
Chalk Lime	2 5 0
Best Ground Blue Lias Lime	1 17 6
Hair	per cwt. 2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 6d. each and credited 1s. 6d., if returned in good condition within three months carr. pd.

Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R, per ft. cube	2 10
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station, per ft. cube	1 3
Delivered free on rail Nine Elms, S.R. per ft. cube	1½

Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4½
Do. do. delivered on road waggons at above stations, per ft. cube	4 5½

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ¼d. beyond 30 ft.

HOPTON-WOOD STONE—

	s. d.
F.O.R. Quarries Wirksworth, Derbyshire, Random blocks from 10 ft. and over P. ft. cb.	14 0
Sawn two sides	22 6
Sawn, three or four sides	27 6

	s. d.
CHILMARK—RANDOM BLOCK—	
At Nine Elms, per ft. cube	3 11
YORK STONE, BLUE—*Robin Hood Quality.*	
Delivered at any Goods Station London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) Per ft. super	5 6
6 in. rubbed two sides, ditto "	6 0
3 in. sawn two sides slabs (random sizes) "	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) "	1 6½
1½ in. to 2 in. ditto "	1 3½
HARD YORK—	
Delivered at any Goods Station, London.	
Scappled random blocks Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) Per ft. super	5 1½
6 in. rubbed two sides, ditto "	6 1½
4 in. sawn two sides slabs (random sizes) "	3 1½
3 in. ditto ditto "	2 8
2 in. self-faced random flags Per yd. super	8 0

CAST STONE.†

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills 10s. 0d.

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 × 11	£23 10	3 × 6	£18 10
4 × 9	22 10	3 × 11	19 10
4 × 8	21 0	2 × 11	19 10
4 × 7	19 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 10	3 × 4½	18 0
2½ × 7	18 10	3 × 4	18 0

PLANED BOARDS.

1 × 11	£22 10	1 × 9	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
¾	16/-	1¼	26/-
⅝	17/-	1½	32/6
1	20/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	21/-
1¼	26/-
1½	32/6

MATCHING (BEST).

Inches.	per sq.
¾	16/-
⅝	18/6
1	22/6

ins	BATTENS.	s. d.
¾ × 2	... per 100 ft.	2 6

SAWN LATHS. s. d.
Per bundle ... 2 3

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt.	4 7 0 to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	29 15 0	18 by 10	15 12 6
22 by 12	25 0 0	18 by 9	13 15 0
22 by 11	22 10 0	16 by 10	13 10 0
20 by 12	22 0 0	16 by 8	10 7 6
20 by 10	19 7 6		

TILES.

Delivered at London rate stations in full truck loads (not less than 6 tons. Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£4 7 0
ditto hand-made ditto	5 0 0
Ornamental ditto	5 8 6
Hip and valley tiles (per dozen) } Hand-made	0 9 6
} Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—	
R.S. Joists, cut and fitted	£11 0 0
Plain Compound Girders	12 0 0
Stanchions	15 0 0
In Roof Work	18 0 0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ½ in.	10 15 0
⅜ in.	11 0 0	¾ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars	Genuine Wrot. (Puddled) Iron Tubes and Tubulars	Standard Fittings	Standard Flanges
	Sizes ⅛ in. to 6 in.	Sizes ⅛ in. to 6 in.	Sizes ⅛ in. to 6 in.	Sizes ⅛ in. to 6 in.
	%	%	%	%
Gas	65	52½	57½	70
Water	61½	48½	52½	65
Steam	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Price ex Works

Per yd. in 6 ft. lengths.	Angles and Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/5½	1/1½	4½d.
3½ in.	1/6½	1/3	5½d.
4 in.	1/6½	1/4½	6½d.
4½ in.	1/8	1/6½	9½d.
5 in.	1/10½	1/8½	10d.

O.G. GUTTERS.

3 in.	1/7½	1/5½	7d.
3½ in.	1/9½	1/5½	7½d.
4 in.	1/11	1/6½	8d.
4½ in.	2/0	1/9½	9½d.
5 in.	2/4½	2/0½	11½d.

RAIN WATER PIPES, &c.

Per yd. in 6 ft.	Pipe.	Bends, stock Branches, angles, stock angles	
2 in.	2/2½	1/4½	2/0
2½ in.	2/3½	1/6½	2/4½
3 in.	2/9½	1/11	2/10½
3½ in.	3/3½	2/3½	3/3½
4 in.	3/9	2/9	4/0½

Less 20 per cent. trade discount.

Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Stock.

	Pipe, angles, stock angles.	Bends, stock Branches.	
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts.	2 8	1 11	2 3
2½ in. "	3 0	2 1	2 10
3 in. "	3 4	2 3	3 5
3½ in. "	3 7½	2 10	3 11
4 in. "	4 0	3 2	4 6

L.C.C. COATED DRAIN PIPES—London Prices ex Stock.

	Bends, stock Branches. Pipe, angles, stock angles.		
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	3 0	4 6	7 0
	cwt. qr. lbs.		
4 in. "	1 1 20 ...	4 9	5 6 8 9
5 in. "	1 2 22 ...	5 10	9 6 13 6
6 in. "	2 0 6 ...	6 10	12 0 18 0

Gaskin for jointing 4½/- per cwt.

	Per ton in London. £ s. d.	£ s. d.
IRON—		
Common bars	10 0 0 to	10 10 0
Staffordshire Crown Bars—		
Good merchant quality	10 10 0 to	11 0 0
Staffordshire Marked Bars	14 0 0 ...	15 0 0
Mild Steel Bars	9 0 0 ...	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 10 0 ...	9 0 0
Hoop iron, basis price	11 0 0 ...	12 0 0
" Galvanised	27 10 0 ...	28 10 0
Soft Steel Sheets, Black—		
Ordinary sizes, to 20 g.	11 0 0 ...	11 10 0
" " " 24 g.	12 0 0 ...	13 0 0
" " " 26 g.	14 0 0 ...	15 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	14 0 0 ...	15 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	15 0 0 ...	16 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17 10 0 ...	18 10 0
No. 1 quality £4 per ton extra.		
Flat and Galvanised Corrugated Sheets—		
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13 10 0 ...	15 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	15 10 0 ...	16 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16 10 0 ...	18 0 0
Sheets, Galvanised Flat, Best quality—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	14 10 0 ...	16 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	15 0 0 ...	17 0 0
Best Soft Steel Sheets, 26 g.	16 10 0 ...	18 0 0
Cut Nails, 3 in. to 6 in.	15 10 0 ...	17 0 0
(Under 3 in. usual trade extras.)		

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

		s. d.
Seamless Copper tubes (basis)	per lb.	0 9
Strong sheet	"	0 10
Thin	"	0 11
Copper nails	"	1 0
Copper wire	"	0 11

PLUMBERS' BRASS WORK.

Delivered in London

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
29/-	45/-	76/-	153/-	246/-	510/-	per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
41/6	62/-	92/-	174/-	300/-	588/-	per doz.

*The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*contd*).

River Pattern Screw Down Main Ferrules.

¾ in. | 1 in. | 1¼ in.
39/- | 60/- | 116/6 per doz.

Caps and Screws.

1¼ in. | 1½ in. | 2 in. | 3 in. | 3½ in. | 4 in.
7/6 | 10/- | 14/- | 23/- | 30/- | 42/- per doz.

Double Nut Boiler Screws.

¾ in. | 1 in. | 1¼ in. | 1½ in. | 2 in.
7/6 | 11/- | 17/- | 29/- | 36/- | 63/- per doz.

Brass Sleeves.

1¼ in. | 2 in. | 3 in. | 3½ in. | 4 in.
10/- | 12/- | 20/- | 24/- | 31/- per doz.

New River Pattern Croydon Ball Valves S.F.

¾ in. | 1 in. | 1¼ in. | 1½ in.
35/- | 56/- | 98/- | 162/- | 228/- per doz.

Drawn Lead P. & S. Traps with Grass Cleaning Screw.

1¼ in. | 2 in. | 3 in.
8 lbs. P. traps ..... | 33/- | 41/- | 56/- | 101/- per doz.
8 lbs. S. traps ..... | 35/- | 45/- | 66/- | 126/- ,,

Tin.—English Ingots, 2/1 per lb. Solder—Plumber, 11d., Tinmen's, 1s., Blowpipe, 1/1 per lb.

LEAD, &c.

(Delivered in London.) — £ s. d.

	£	s.	d.
Lead—Sheet, English, 4 lb. and up	19	10	0
Pipe in coils	16	10	0
Soil pipe	24	0	0
Compo pipe	24	10	0

Note.—Country delivery, 20s. per ton extra; lots under 3 cwt. 4s. per cwt. extra, and over 3 cwt. and under 5 cwt., 2s. 6d. per cwt. extra. Cut to sizes 4s cwt. extra.

Old lead, ex London area, at Mills ..... per ton } £10 0 0

PAINTS, &c.

	£	s.	d.
Raw Linseed Oil, in pipes ..... per gallon	0	2	2
,, ,, ,, in barrels ..... ,,	0	2	4
,, ,, ,, in drums ..... ,,	0	2	7
Boiled ,, ,, in barrels ..... ,,	0	2	7
,, ,, ,, in drums ..... ,,	0	2	10
Turpentine, in barrels ..... ,,	0	3	11
,, in drums (10 galls.) ,,	0	4	1
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)	44	0	0

Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

Genuine White Lead Paint.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered — £ s. d.

	£	s.	d.
	62	0	0
Red Lead, Dry (packages extra) ... per ton	32	0	0
Best Linseed Oil Putty ..... per cwt.	0	13	6
Size. XD quality ..... fkn.	0	3	0

VARNISHES, &c.

		Per gallon		
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Opal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	0
Fine Copal Flatting	ditto	1	0	0
Hard Drying Oak	ditto	0	18	6
Fine Hard Drying Oak	ditto	0	19	6
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	6
Best ditto	ditto	1	2	6
Best Japan Gold Size		0	12	0
Best Black Japan		0	10	0
Oak and Mahogany stain (water)		0	12	6
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebene		0	9	0
Culrass Black Enamel		0	7	0

GLASS.

English Sheet Glass in Crates of Stock Sizes.

per ft.		Per ft.
15 oz. fourths 2½d.	32 oz. fourths	6½d.
15 ,, thirds ... 2¾d.	32 ,, thirds	8½d.
21 ,, fourths 3½d.	Obscured Sheet, 15 oz. ...	3d.
21 ,, thirds ... 3¾d.	,, ,, 21 oz. ...	4½d.
26 ,, fourths 4½d.	Fluted, 15 oz. 6½d., 21 oz.	9d.
26 ,, thirds ... 5¼d.	Em'lld, 15 oz. 4½d., 21 oz.	5½d.

Extra price according to size and substance for squares cut from stock.

English Rolled plate in Crates of Stock Sizes.

	Per ft
Rolled plate ¼ in.	4½d.
Rough rolled ⅜ in.	5½d.
Rough rolled ½ in.	5½d.
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

"Vita" Glass.

	Per foot. s.	d.
Clear sheet—not exceeding 1 foot	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet	3	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1	0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide	2	6

NEW BUILDINGS IN SCOTLAND

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at The Builder *Office not later than Wednesday morning.*

AYR.—Additions.—Plans are in hand for reconstruction and addition to the Station Hotel. L.M.S. Engineers and Architects, Central Station, Glasgow, have prepared the plans.

BATHGATE.—Housing.—The T.C. has recommended the following housing schemes for the next five years:—To replace houses unfit for human habitation, 130; to accommodate persons under overcrowded conditions, 250; to meet the needs of other persons, 150.

DORNOCH. — Additions. — Plans are in hand for the reconstruction and addition of Railway Hotel. The plans are by the L.M.S. Engineers and Architects, Central Station, Glasgow.

DUNFERMLINE.—Houses.—The Corporation are to erect 700 houses under the five-years' programme.

EDINBURGH. — Hospital. — Mr. T. W. Turnbull, F.I.A.S., M.I.Struct.E., is the architect for the new Simpson Memorial Maternity Hospital, which as a department of the Edinburgh Royal Infirmary will take the place of the present Simpson Memorial Hospital.

EDINBURGH. — Housing. — The Public Health Committee has authorised the erection of 200 houses under the 1925 Act on ground available under the St. Leonards (second section) improvement area.

EDINBURGH.—Housing.—The Edinburgh Dean of Guild Court has given sanction to the following work:—Thornton & Co., Ltd.—alterations to 78 and 79, Princes-street, and 4, 6, 8, 10, and 12, Hanover-street, at £10,000. The architects are Messrs. Maclennan & Cunningham; Lothian District Buildings, Ltd.—28 houses at Prospect Bank-road, Leith; J. Miller—house at Corstorphine Hill-avenue; 7 houses at new road off Craiglockhart-avenue, and cul-de-sac off new road; 11 houses at Allan Park-drive and crescent, Slateford; and 13 houses at Vandeleur-avenue; G. Learmonth Walls—71 semi-detached houses at Glenlee-gardens and avenue and Willowbrae-avenue; and R. M. & A. Mackay—warehouse and store at Pitt-street, Leith.

GIRVAN. — Housing. — The T.C. has approved the erection of 44 houses in Park-road.

GLASGOW.—Additions.—Plans have been passed by the Dean of Guild Court for additions to the mills at Kelvindale-road, for the Associated Paper Mills, Ltd.

GREENOCK.—Church.—Plans presented by Mr. James Mallin were passed by the Dean of Guild Court for a new Roman Catholic church to be erected at Orangefield, at an estimated cost of between £17,000 and £19,000.

HADDINGTON. — Houses.—The Corporation are to erect 272 houses under the five-years programme.

INVERNESS. — Additions. — Plans are in hand for the reconstruction and additions to the Station Hotel. The plans are by the L.M.S. Engineers and Architects, Central Station, Glasgow.

KILWINNING. — Hostel. — Ayrshire C.C. have under consideration the erection of a county hostel, at £200,000. Mr. W. Reid, architect, County Offices, Wellington-square, Ayr.

KINCARDINE.—Housing.—The C.C. has decided that the programme of 90 houses for the next five years be forwarded to the Scottish department for approval. The C.C. decided that 45 should be proceeded with forthwith.

MONKTON.—House.—Plans are in hand for a new mansion house and other offices. Mr. J. Houston, architect and surveyor, Bridgend House, Kilbirnie.

MORAYSHIRE.—School.—The C.C. are to erect a new school, costing £12,000, at Bishopmills. Mr. R. B. Pratt, architect and quantity surveyor, 110, High-street, Elgin.

PAISLEY.—Extension.—The committee of Paisley Free Library and Museum have agreed to recommend to the Town Council to proceed with the erection of a new wing on the west side of the existing building in High-street as an addition to the museum. It is calculated that the west wing will require the sum of about £30,000.

PAISLEY.—Hospital.—The plans of one of the blocks of the new infectious diseases hospital have been approved by the Dean of Guild Court. The new hospital is to be erected at Hawkhead. The new hospital will cost about £100,000. The architects are Sir John Burnet, Tait and Lorne, 1, Montague-place, London, W.C.1.

WIGTOWNSHIRE.—Houses.—The C.C. has approved of a recommendation that houses be built in rural areas as follow:—Drummore, 20; Glenluce, 20; Garlieston, 16; Port William, 16; Isle of Whithorn, 8; Leswalt, 2; total 82. It was further resolved to build 1,000 more houses during the next five years.

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. The bricklayers in the Glasgow district have ½d. per hour extra. Painters, by ruling of the Scottish National Painters' and Decorators' Joint Council, have from January 1 new rates. Grade A towns, 1/6 per hour; Grade B, 1/5; Grade C, 1/4; Aberdeen has a special rate of 1/5½. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classifications ...	A	A¹	A²	A³	B	B¹	B²	B³
Craftsmen	1/6	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3
Labourers	1/2	1/1½	1/1½	1/0½	1/0½	1/-	/11½	/11½

Aberdeen	A	Dundee	A	Hawick	A²	Perth	A
Airdrie	A	Dunfermline	A	Helensburgh	A	Perthshire	A
Alexandria	A	Dunoon	A	Inverness	B	Peterhead	A
Arbroath	A³	East Lothian	A	Kilmarnock	A	Renfrewshire	A
Ayrshire	A	Edinburgh	A	Kincardineshire	A²	Rothesay	A
Bathgate	A	Falkirk	A	Kinross-shire	A	Roxburghshire	A
Bo'ness	A	Forfarshire	A³	Kirkcaldy	A	St. Andrews	A
Broughty Ferry	A	Fort William	A	Lanarkshire	A	Selkirkshire	A
Clackmannanshire	A	Galashiels	A³	Leith	A	Stirling	A
Coatbridge	A	Glasgow	A	Midlothian	A	Stirlingshire, West	A
Dumbartonshire	A	Greenock	A	Motherwell	A	West Lothian	A
Dumfries	A³	Hamilton	A	Peeblesshire	A²	Wishaw	A
Dumfriesshire	A³						

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 104.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	8	9
Add if in clay	„ „	1	0
Add for every additional depth of 6 ft.	„ „	0	6
Planking and strutting to trenches	per foot super	0	3
Do. to sides of excavation, including shoring	„ „	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundations 1 to 6	per yard cube	24	3
Add if in underpinning in short lengths	„ „	5	6
Add if in floors 6 in. thick	„ „	2	3
Add if in beams	„ „	2	9
Add if aggregate 1 : 2 : 4	„ „	9	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	„ „	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	27	0	0
Add if in stocks	„	7	0	0
Add if in Staffordshire blues	„	22	0	0
Add if in Portland cement and sand	„	1	5	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING

		s.	d.
Neat flat struck or weathered joint	„	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	„ „	0	0	10
Axed in stocks	„ „	0	0	9
Rubbed and gauged jointed in putty camber or segmental	„ „	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	„ „	0	0	11
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	„	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	„ „	9	6
Three-quarter-inch on flats in two thicknesses	„ „	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	„ „	1	0

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	9
York stone sills fixed	„ „	22	0
Bath stone and all labour fixed	„ „	10	6
Beer stone and all labour fixed	„ „	15	0
Portland stone fixed	„ „	17	6
Chilmark stone fixed complete	„ „	16	6

SLATER.

		s.	d.
Welsh 16in. × 8 in. 3 in. lap. including nails	per square	72	9
Do. 20 in × 10 in. Do. Do.	„	80	9
Do. 24in. × 12in. Do. Do.	„	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	4	0
Do. joists	„ „	4	6
Do. roofs, floors and partitions	„ „	5	0
Do. trusses	„ „	7	3

	¾″	1″	1¼″	2″
Deal rough close boarding per sq.	30/-	35/-	43/-	70/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	„	50	0
Do. to beams	per ft. sup.	0	9
Centre for arches	„	1	6
Gutter boards and bearers	„	1	0

FLOORING.	¾″	1″	1¼″	1½″
Deal-edges shot per sq.	—	38/-	45/-	52/-
Do. tongued and grooved „	—	43/-	50/-	58/-
Do. matchings „	40/-	45/-	—	—
Moulded skirtings, including backings and grounds per ft. sup.	1/4	1/7	1/9	2/3

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	„ „	2	1
Add for fitting and fixing	„ „	0	3
Deal cased frames with 1 in. inner and outer linings, 1¼ in. pulley stiles tongued to linings, hard wood sills with 2in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights, average size		3	6

DOORS.	1¼″	1½″	2″
Two-panel square framed per ft. sup.	2/1	2/3	2/5
Four-panel Do. „	2/4	2/6	2/9
Two-panel moulded both sides „	2/6	2/9	2/11
Four-panel Do. Do. „	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	12	6

	1″	1¼″	1½″
Plain deal jamb linings framed per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers „	1/2	1/4	1/7
Add if cross-tongued „	2d.	2d.	2d.

STAIRCASES.

	1″	1¼″	1½″	2′	2½″
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal stringa wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1¼ in.	per ft. run	0	9
Mahogany handrail, average 3 in. x 3 in.	„ „	6	0
Add if ramped	„ „	12	0
Add if wreathed	„ „	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	0
Plain compound girders	„	18	0
Do. stanchions	„	20	9
In roofwork	„	26	6

RAIN-WATER GOODS.

		3″	4″	5″	6″
Half-round plain rebated joints	ft. run	1/-	1/1	1/3	1/6
Ogee Do. Do.	„	1/2	1/3	1/9	2/3
Rain-water pipes with ears	„	1/3	1/10	—	—
Extra for shoes and bends	each	2/9	3/11	—	—
Do. stopped ends	„	1/1	1/4	1/9	2/6
Do. nozzles for inlets	„	2/2	2/7	3/7	4/-

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	38	0
Do. do. flats	„	37	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	„ „	1	3
Copper nailing	„ „	0	3

	½″	¾″	1″	1½″	2″	4″
Drawn lead waste perft. run	11½	1/4	1/6½	2/5	2/8	—
Do. service „	1/3	1/9	2/-	3/-	—	—
Do. soil „	—	—	—	—	—	5/9
Bends in lead pipe each	—	—	—	—	2/6	6/-
Soldered stop ends „	0/9	1/1	1/6	2/3	2/10	—
Red lead joints „	0/10	0/11	1/2	1/9	2/1	4/3
Wiped soldered joints „	2/3	2/9	3/0	3/10	4/10	6/9
Lead traps and cleaning screws „	—	—	—	10/6	14/-	—
Bib cocks and joints „	6/4	9/7	14/-	—	—	—
Stop cocks and joints „	12/4	14/2	20/8	54/-	—	—

PLASTERER.

		-s.	d.
Render, float and set in lime and hair	per yard sup.	2	0
Do. Do. Sirapite	„ „	2	3
Do. Do. Keen's	„ „	3	0
Add saw lathing	„ „	1	4
Add metal lathing	„	2	4
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	„ „	2	2
Do. plain face	„ „	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	4	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	6½
26-oz. Do.	„ „	0	7½
Obscured sheet	„ „	0	8
⅛-in. rolled plate	„	0	9
¼-in. rough rolled or cast plate	„ „	0	10
¼-in. wired cast plate	„ „	1	1

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	„ „	0	7
Plain painting, 1 coat	„ „	0	9
Do. 2 coats	„ „	1	2
Do. 3 coats	„ „	1	9
Do. 4 coats	„ „	2	4
Graining	„ „	2	3
Varnishing twice	„ „	1	9
Sizing	„ „	0	3
Flatting	„ „	0	7
Enamel	„ „	1	1
Wax polishing	per foot sup.	0	6
French polishing	„ „	1	2
Preparing for and hanging paper	per piece 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Government Departments*.

Acton.—Additions and alterations at the premises in Stanley-road, for the National United Laundries Corporation, Ltd. Mr. G. P. Pratt, architect, 174, High-street, W.3:—

Dovey & Co., Ltd., Brentford	£2,931
Ferris Bros., Acton	2,910
Bollom & Son, Ltd., Acton	2,877
Lowe & Son, Ltd., Barnes	2,750
Gaze & Son, Ltd., Kingston	2,573
*R. Hewett, Ltd., Acton Green	2,380

Airdrie.—102 houses in Gartlea-road. Messrs. George Arthur & Sons, architects and quantity surveyors, Graham-street :—

Excavation, brick and mason—*R. Paterson & Sons, Ltd.
Joinery, carpentry and ironmongery—*J. & R. Aitken.
Slating work, roughcasting and plastering—*M. Thom & Sons, Ltd.
Plumber—*G. Ferguson.
Glazing—*T. Armour, Ltd.
(All of Airdrie.)

Ayr.—Reconstruction and extension of the Waterside public school, for the C.C. Mr. William Reed, County Architect, Wellington-square, Ayr :—

Excavation, brick and mason—*T. McWhirter, Prestwick.
Slater—*W. Auld & Son, Ayr.
Painter—*A. F. McDougall, Prestwick.
Joinery, carpentry and ironmongery—*T. Findlay & Sons, Mauchline.
Plaster—*Tait Bros., Dalry.
Electrical fittings and installation — *Campbell Adamson, Prestwick.
Plumber—*W. Auld & Sons, Ayr.

Belfast.—Warehouse in Franklin-street. Mr. James Scott, architect, Fountain-street :—

*H. & J. Martin, Ltd. ... (approx.) £10,000

Belfast.—Heating installation at Lancaster-street elementary school, for the E.C. :—

*Bell & Martin, Kensington-road, Belfast £293

Blackpool.—Shelters on the cliffs at Bispham, for the C.B. :—

*Corporation's Foundry Department.

Blackpool.—Rebuilding of block of shops and offices on land bounded by Church-street, Cookson-street and Caunce-street, for the C.B. :—

*H. Joyce & Sons, Ltd.

Blackpool.—Transformer house in Ansdell-road, for the C.B. :—

*R. Hogarth.

Bradford.—178 tenements on the White Abbey estate, for the Corporation :—

*E. Balmforth, Ltd.

Bridgnorth.—Additions to present building, for the Bridgnorth and South Shropshire Infirmary Committee. Mr. E. Trevor, architect and surveyor, North Gate, Bridgnorth :—

Horne & Meredith	£2,026 0
*T. E. Lay & Son, Underhill-street	1,959 17
G. & E. Edge, Underhill-street	1,904 0

(All of Bridgnorth.)

Bury.—Conveniences at the cemetery, for the T.C. Mr. J. Chadwick, Borough Surveyor :—

*J. Tinline, Ltd., Bury.

Cannock.—Additions to Belt-road school for domestic training centre, for the E.C. Mr. S. Harrison, L.R.I.B.A., architect :—

*Perks & Gould, Bilston.

Carlisle.—Three sub-stations in Brampton-road, Aidans-road, and Newby West-road, for the T.C. :—

*J. & R. Bell, Ltd., Nelson-street, Carlisle £567

Carlisle.—New offices for the Provincial Insurance Co., Ltd. Mr. H. I. Graham, architect, 15, Bank-street :—

*J. Laing & Sons, Dalston-road, Carlisle.

Chesterfield.—'Bus station in Vicar Lane, for the T.C. Mr. W. S. Wilson, Borough Surveyor, Glumangate :—

Builders—*James Colliss & Sons.
Steelwork—*Markham & Co., Ltd.
(Both of Chesterfield.)
(Estimated cost, £7,500.)

Chesterfield.—Electricity showroom in Holywell-street, for the T.C. :—

*C. E. Gaunt, Chesterfield £3,828

Colyton.—Restoration, after fire, of St. Andrew's church. Mr. Harbottle Reed, F.R.I.B.A., architect, 12, Castle-street, Exeter :—

A. Richards & Son, Colyton	£8,055 0 0
C. H. Warren, Colyton	7,252 14 8
Plasm Co., East Molesey	6,579 10 8
J. Dennis & Son, Knowle Braunton	6,549 0 0
W. Brealy, Exeter	6,400 0 0
R. G. Spiller, Chard	5,998 0 0
Staverton Builders, Totnes	5,940 0 0
S. J. Richards & Son, Colyton	5,721 4 5
Nicks Bros., Bradninch	5,654 1 2
*Dart & Francis, Ltd., Crediton	5,297 0 0

Coventry.—Additions to factory, for Messrs. Owen, Thornell, Ltd., Balsall Common. Messrs. McKewan & McKewan, architects, King's-court, 115-117, Colmore-row, Birmingham :—

*C. J. Groves & Sons, Ltd., Dorridge, nr. Birmingham.

Coventry.—Electricity sub-station at Tile Hill-lane, for the T.C. :—

*H. Clarke & Sons, Coventry £330

Cowdenbeath.—80 houses at Moss-side-road, for the T.C. Mr. C. H. Alexander, Burgh Architect :—

Excavation, brick and mason—
*T. Miller & Sons, Dunfermline £8,492
Slating and roughcasting—
*W. Smith & Sons, Crossgates 1,741
Glazing—
*T. Coutts & Sons, Kirkcaldy 125
Railings and gates—
*A. Mowatt, Windygates 228
Plaster work and cement—
*Galloway & Gordon, Dunfermline 1,683
Joinery, carpentry and ironmongery—
*J. Reid & Sons, Crossgates 5,307
Plumbers—
*D. Thomson and Q. V. Benning, Cowdenbeath 2,731
Electric fittings and installation—
*J. Scott & Co., Dunfermline 248
Painter—
*J. M. Henderson, Cowdenbeath 468

Cupar.—24 houses, for the T.C. Mr. A. D. Haxton, architect, Commercial-road, Leven :—

Excavation, brick and mason — *D. Nairn & Son, Ladybank.
Slater—*W. Currie & Sons, Kirkcaldy.
Plumber—*W. Nicol & Sons, Ltd., Buckhaven.
Iron and wooden fencing — *W. B. Wardie & Sons Windygates.
Joinery, carpentry and ironmongery—*Noble & Reid, Cupar.
Painter—*W. Robertson & Sons, Leith.
Glazing—*D. & J. Edwards, Cupar.

Derby.—700 tons of structural steelwork, for extensions to the factory adjoining the L.M.S. Railway, for Messrs. Ley's Malleable Casting Co., Ltd., Vulcan Iron Works :—

*Rubery, Owen & Co., Darlaston.
(Estimated cost £22,000.)

Dewsbury.—Electricity transformer sub-station in Asman-square, for the T.C. :—

*Hinchliffe Aldroyd £323 9

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Dewsbury.—32 houses on Pilgrim Farm estate, for the T.C. :—

Mason—
*J. Donovan £4,079 9 0
Joiners—
*J. Brooke & Sons 2,038 0 0
Slaters—
*Hill & Nelson, Ltd. 634 15 10
Plumber—
*T. Wilson 1,226 18 10
Plasterers—
*A. Idle & Sons 568 4 0
Painters—
*J. A. Schorah & Son, Ltd. 170 0 0

Dewsbury.—16 houses on the Conyers Pit site, for the T.C. :—

Mason—
*A. C. Smith £2,039 14 6
Joiners—
*J. Brooke & Sons 1,019 0 0
Slaters—
*Hill & Nelson, Ltd. 317 7 11
Plumber—
*T. Wilson 613 9 5
Plasterer—
*A. Idle & Sons 284 2 0

Dublin.—Additions to St. Peter's School, White friars-street, for the Carmelite Fathers. Mr J. W. O'Sullivan, architect, Dublin :—

*O'Callaghan & Co., Ltd., Dublin.
Steelwork—*J. & C. M'Loughlin, Pearse-street, Dublin.

Edinburgh.—Reconstruction and additions to the College of Domestic Science. Messrs. Cairn & Ford, architects and surveyors, 73, George-street :—

Building and brick—*A. & J. Cameron.
Plaster—*W. Stewart.
Plumbers—*Hulton Bros.
Tile and terrazzo—*Brown & Co., Ltd., Paisley.
Joinery, carpentry and ironmongery—*—.
Cameron.
(Remainder of Edinburgh.)

Edinburgh.—30 houses, West Saville-place. Mr. T. Bowhill Gibson, architect and surveyor, 30, Rutland-square :—

*Donald Alexander, Edinburgh.

Edgware.—Conversion of casual wards into local offices at Redhill Institution, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, Westminster, S.W.1.

G. Groves & Sons	£4,884
G. Godson & Sons, Ltd.	4,519
J. McKenzie	3,996
A. Fairhead & Sons, Ltd., Enfield	3,995
Wm. Moss & Sons, Ltd.	3,970
Newby Bros., Ltd.	3,965
W. S. Try, Uxbridge	3,887
Albert Monk	3,850
L. & W. Whitehead, Ltd.	3,835
‡J. Laing & Son, Ltd.	3,806

(Remainder of London.)

Felling-on-Tyne.—127 houses, for the U.D.C. Mr. C. W. Hall, surveyor :—

*L. W. Evans, Coniscliffe-road, Darlington £38,905

Gateshead-on-Tyne.—Branch premises in Kell's-lane, for the Gateshead Co-operative Society. C.W.S. Architect's Dept., 90, Westmoreland-road, Newcastle :—

*C.W.S. Building Dept., West Blandford-street, Newcastle.

Glasgow.—New buildings, for the Glasgow Subway. Mr. Alexander Findlay, architect and engineer, Transport Offices, Bath-street :—

Excavation, brick and mason—*Brown, Fraser & Co.
Steel structural—*Fleming Bros.
Glazing—*Pennycook Patent Glazing & Engineering Co., Ltd.
Steel sheeting — *Robertson Protected Metal, Ltd., Wolverhampton.
Plumber—*G. Munro.
Joinery, carpentry and ironmongery—*Scott & Wilson.
(Remainder of Glasgow.)

Glasgow.—Plaster work at Elmvale rehousing scheme, for the T.C. Mr. W. McNab, Housing Architect :—

*W. Walker & Son (Glasgow), Ltd., Glasgow £960 16 3

Harrow Weald.—New senior school in Locket-road, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, S.W.1 :—

Harry Neal, Ltd., Northwood	£32,093
W. J. Dickens	31,420
Newby Bros., Ltd.	30,565
G. H. Denne & Son, Ltd.	30,425
J. C. Rackham, Harrow Weald	30,370
A. Roberts & Co., Ltd.	30,300
L. & W. Whitehead, Ltd.	30,166
W. Lacey, Hounslow	29,997
W. S. Try, Uxbridge	29,863
T. J. Lovell & Son, Gerrard's Cross	29,830
‡Kirk & Kirk, Ltd., Putney	29,735

(Remainder of London.)

Hinckley.—Additions to factory at Barwell, for Messrs. Moulds & Moor, Ltd. Mr. E. J. Williams, architect, 13, New-street, Leicester :—

*Archer, Son & Lockley, Hinckley.

Houghton-le-Spring.—61 houses on the Halls-lane estate, for the U.D.C. Mr. V. J. Hunter, surveyor :—

*A. H. Balmer, Houghton-le-Spring... £15,491

Hull.—Marfleet-lane bridge and approaches, for the T.C. :—

Marfleet-lane bridge—
*Wellerman Bros., Ltd., Sheffield £8,876 4 7

Approach roads and fencing—
*Henry Hill & Co., Hull £16,683 6 9

Kendal.—Reconstruction of licensed premises, Stricklandgate, to be known as the "Woolpack Hotel," for Messrs. Whitwell, Mark & Co., Ltd., The Brewery, Highgate. Miss Marjorie Miles, A.R.I.B.A., architect, 118, Highgate :—

*G. F. Martindale & Sons, Kendal.

Kettering.—Buildings at the Corby works, for Messrs. Stewarts & Lloyds, Ltd., engineers. Messrs. H. H. Brassert & Co., consulting engineers, Brook House, Walbrook, London, E.C.4 :—

*Pearson & Knowles Engineering Works, Ltd., Warrington.
*Edward Wood & Co., Ltd., Manchester.

Kettering.—Alterations to business premises in High-street for Mr. A. G. Wills. Mr. J. T. Blackwell, architect, Gold-street Chambers :—

*Smith, Edmunds & Co., Kettering.

Kidderminster.—Shopfitting work at Worcester-street :—

*A. Edmonds & Co., Ltd., 91, Constitution-hill, Birmingham, 19.

Killarney.—New wing at the Mental Hospital :—

Coughlan Bros., Ltd., Cork ... £36,490 13 4

Lancaster.—Extensions to the Co-operative stores, for the Lancaster and District Co-operative Society, Ltd. Mr. R. W. Jackson, architect, 43, Church-street :—

*Thompson & Morris, Lancaster.
(Estimated cost: £26,000.)

Leeds.—Extensions to factory premises at Marlbeck House, for Messrs. Marshalls, Ltd. Messrs. Braithwaite & Jackman, architects :—

*J. Ledgard & Son.

Leeds.—New Baptist Chapel and Sunday schools on the Rookwood housing estate, Osmondthorpe :—

*L. Harpham, Ltd.

Leicester.—New premises at the corner of Charles-street and Belgrave-gate, for Messrs. Billson & Grant. Mr. A. S. Phipps, architect, 39, London-road :—

*E. Fox & Co., Leicester.

Leyton.—Various works for the new public baths in the High-road, for the T.C. :—

Sanitary ware—
*Adamsez, Ltd. £604 18 10

Bath partitions—supply and fixing of slabs—
*Leeds Fireclay Co. 2,263 0 0

Large bath slabbing—
*Shaw's Glazed Brick Co. 1,059 7 11

Small bath slabbing—
*Leeds Fireclay Co. 370 5 3

¶**London.**—Tenders accepted by H.M.O.W. for the week ended January 4 :—

Counter store cupboards.—Simpoles, Ltd., 38, Deansgate, Manchester, 3, and the Fairfield Shipbuilding and Engineering Co., Ltd., Govan, Glasgow, S.W.1.
Bradford Sorting Office and Garage—heating and hot water services—Vincent Roberts & Co., 7, East-street Mills, Leeds, 9
Kidderminster Employment Exchange—erection—W. J. Whittall & Son, Ltd., 132, Lancaster-street, Birmingham, 4.
Cherry Hinton, Cambridge, Telephone Exchange—erection—John Ray, Ltd., Norton Way, N. Letchworth.
Dormant claims cupboards and trays—G. A. Harvey & Co. (London), Ltd., Woolwich-road, Charlton, S.E.7.
Houses of Parliament—restoration of stonework; clock tower carving—Arrowsmith, 10, Cottage-grove, Stockwell, S.W.9.
Leadenhall-street Branch Post Office, Whittington House—adaptations, etc.—Soole & Son, Ltd., Dunstable Works, Sheen-road, Richmond.
Science Museum, South Kensington—internal painting—John Mowlem & Co., Ltd., 91, Ebury Bridge-road, S.W.1.

¶**London.**—The following works contracts have been placed by the War Office during the week ended January 4 :—

Bulford—regimental institute, etc.—W. E. Chivers & Sons, Ltd., Devizes.
Chatham—artificers' work—H. Goodsell, Maidstone.
Aldershot—regimental institute—J. B. Edwards and Co. (Whyteleafe), Ltd., London.
Tilshead—cookhouse, bath-house, etc.—James & Crockerell, Durrington.
Salisbury—alterations to grocery shops—W. E. Chivers & Sons, Ltd., Devizes.
Didcot—repairs to concrete floors—Boshers (Cholsey), Ltd., Cholsey.
Perham Down—sergeants' mess—W. E. Chivers & Sons, Ltd., Devizes.
Chiseldon—artificers' work—Canning & Seargeant, Wokingham.
Aldershot—extra gymnasium accommodation—Crosby & Co., Ltd., Farnham.

London.—New building at 169-171, Oxford-street, W.1. Mr. Morris de Metz, A.R.I.B.A., architect, 34, Upper Berkeley-street, W.1 :—

Ford & Walton	£23,292
F. & H. F. Higgs	21,659
Patman & Fotheringham	21,573
Gaze	21,231
Bovis	21,023
Griggs	20,910
Chas. Berger	20,899
*Carmichael	20,273

(All of London.)

Macclesfield.—28 houses at Poynton, for the R.D.C. Mr. J. H. Walters, L.R.I.B.A., architect, Moody-chambers, Moody-street, Congleton : —

*J. H. Parrott, Bollington £8,120
(In lieu of tender withdrawn.)

Manchester.—Two bathroom and lavatory annexes to ward 23 at Monsall Hospital, for the T.C. Mr. G. Noel Hill, F.R.I.B.A., City Architect :—

Builders—*Fearnley & Sons, Ltd., Salford.
Mason—*Mather & Ellis.
Plumber, glazier, gasfitter—*J. Turton & Sons.
Plasterer—*A. & S. Wallace.
(Remainder of Manchester.)
(Estimated cost, £1,000.)

Manchester.—Fire station and police station at Wythenshawe, for the T.C. Mr. G. Noel Hill, F.R.I.B.A., City Architect :—

Builders—*A. Hodkinson, Ltd.
Mason—*W. Ellis.
Carpenter and joiner — *M. Stone & Sons, Altrincham.
Roof tiler—*F. Brown & Son, Walkden.
Plumber and glazier—*Cowlishaw & Co.
(Remainder of Manchester.)
(Estimated cost, £950.)

Manchester.—Cleansing station at Monsall Hospital, for the T.C. Mr. G. Noel Hill, F.R.I.B.A., City Architect :—

Builders—*Moston Brick and Building Co., Ltd., Moston.
Concretor and asphalter — *Ragusa Asphalte Co., Ltd., Patricroft.
Slater—*Valentine & Sons.
Plumber—*Heron & Son.
Plasterer—*J. S. Haworth.
Painter—*C. Bell.
Steelwork—*Edward Wood & Co., Ltd.
(Remainder of Manchester.)
(Estimated cost, £4,600.)

Manchester.—Conveniences in Albert-square, for the T.C. Mr. G. Noel Hill, F.R.I.B.A., City Architect :—

*Normanton's, Ltd., Manchester.
(Estimated cost £3,500.)

Manchester.—Bridge under the railway at School-lane, Didsbury, for the L.M.S. Railway and the Corporation :—

*J. M. Firth & Sons, Todmorden.

Manchester.—Reinforced concrete foundations and supporting towers for chimneys, etc., at Barton power station, for the T.C. Mr. H. C. Lamb, Chief Engineer :—

*Gerrards & Sons, Ltd., Swinton.
(Estimated cost £23,000.)

Manchester.—12 shops at Hollyhedge, on the Wythenshawe estate, for the Corporation. Mr. G. Noel Hill, F.R.I.B.A., City Architect :—

*G. & J. Seddon, Ltd., Little Hulton, nr. Bolton.
(Estimated cost £10,000.)

Margate.—Structural alterations, staybrite steel shopfronts and interior fittings at 221, Northdown-road :—

*Pike & Pottengell, Ramsgate.

Market Drayton.—Pavilion, etc., at the public baths, for the U.D.C. Mr. J. G. Bailey, surveyor :—

*T. Healey, Market Drayton.
(Estimated cost £250.)

Middlesbrough.—Shops and offices in Eastbourne-road, for Messrs. Palladium, Ltd. Messrs. Kitching & Co., architects, 21, Albert-road :—

†G. W. Lazenby, Ferryhill.

Motherwell.—Higher Grade R.C. school, for the Lanarkshire C.C. Mr. John Stewart, architect, Albert-street :—

Excavation, brick and mason—
*Murdoch MacKenzie, Ltd., Motherwell £14,684 10 8

Carpentry, joinery and ironmongery—
*Lanarkshire County Works Department, Motherwell 3,791 13 8½

Slater work and roughcasting, etc.—
*Wilson & Hendry, Hamilton ... 942 16 10

Plumber—
*Robert S. Renfrew & Sons, Ltd., Glasgow 2,805 4 9

Plaster—
*G. Bryson, Motherwell 2,086 11 9

Glazing—
*J. P. McPhie, Glasgow 242 9 8

Tile and terrazzo—
*R. Brown & Sons, Ltd., Glasgow 1,466 3 8

Iron railings and gates—
*R. Marchbanks & Sons, Larkhall 417 4 5

Steel casement windows—
*McLean & Co., Glasgow 884 12 8

Asphalt work—
*Limmer & Trinidad Lake Asphalting Co., Ltd., Glasgow 120 9 6

Nawton.—Alterations and additions at Kirkdale Manor, for Sir Gervaese Beckett, Bart. Mr. J. C. Proctor, architect, Leeds :—

*F. Shepherd & Sons, Ltd.

New Ferry.—Erection of the Church of St. John the Evangelist in Bebington-road, for the Very Rev. Canon O'Leary, P.P. Mr. W. C. Mangan, architect, 18, Guildhall-street, Preston :—

Steelwork — *Redpath, Brown & Co., Ltd., Liverpool.
Asphalting—*Bolton & Hayes, Ltd., Bolton.
Heating—*C. Soward & Co., Ltd., Preston.
Roof ventilators—*Rigby & Mellor, Ltd., Bury.
Rustic facings—*Ruabon Brick Co., Ltd.
Plastering and tiling—*Adams Bros. (Liverpool), Ltd., Liverpool.

Newcastle-on-Tyne.—Conversion of premises in Bigg Market into shops and offices. Mr. J. N. Fatkin, architect, 77, Westgate-road :—

*J. R. Rutherford & Sons, The Minories, Jesmond, Newcastle.
Lifts—*Pickering & Co., Stockton-on-Tees.

Newcastle-on-Tyne. — Interior painting and cleaning of the Town Hall, for the T.C. :—

*Stephenson (Decorators), Ltd., Claremount-street, Newcastle £321

Newcastle-under-Lyme. — Temporary infants' school at Westlands estate, for the E.C. Mr. A. Cotton, Borough Surveyor :—

‡Pattison & Hall, Ltd., Newcastle-under-Lyme £275 4

Old Hill.—Offices in Halesowen-road, for the Rowley Regis and District Benefit Society, 286, Halesowen-road. Messrs. A. Pye, Simms & Gifford, architects, 232, High-street, West Bromwich :—

*J. M. Tate & Sons, Cradley Heath.
(Estimated cost £5,000.)

Portsmouth.—Bathing Pool and children's conveniences at Lord Mayor Treloar Cripples' Hospital, Hayling Island, for the T.C. City Engineer.

*Jno. Croad, Ltd., Portsmouth £1,528

Portsmouth.—Extension to South Parade Pier Pavilion Stage, for the T.C. Mr. R. J. Jenkins, City Engineer :—

*A. D. Dawnay & Sons, Ltd., Battersea, S.W.11 ..... 876 12 2

Reigate.—House in Pilgrims-way. Mr. E. R. Taylor, A.R.I.B.A., architect, 5, Manchester-square, W.1 :—

*D. S. Richardson, 8, Wigmore-street, W.1.

Salford.—Electricity transformer sub-station in Heys-road, Prestwich, for the T.C. :—

*W. Gornall & Sons, Ltd., Salford £383

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Shenley.—Erection of section "E" of the Middlesex Colony, Shenley, nr. St. Albans, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, S.W.1:—

Newby Bros., Ltd.	£118,464
Albert Monk	117,553
Henry Knight & Son	117,093
Y. J. Lovell & Son, Gerrard's Cross	116,975
Kirk & Kirk, Ltd.	114,160
W. S. Try, Uxbridge	113,967
Wilson Lovatt & Sons, Wolverhampton	113,916
Higgs & Hill, Ltd.	113,819
R. J. Rowley, Ltd.	113,710
L. & W. Whitehead, Ltd.	113,301
Miskin & Sons, Ltd., St. Albans	111,753
‡J. Laing & Son, Ltd.	108,697

(Remainder of London.)

Stoke-on-Trent.—Co-operative Stores in Carmountside, Abbey Hulton, for the Burslem & District Industrial Co-operative Society, Ltd., 10, Newcastle-street, Burslem. Messrs. Watkin & Maddox, architects, National Provincial Bank-chambers, Burslem:—

*Meiklejohn & Son, Stoke-on-Trent.

Swords.—Dispensary at Cloughran, Swords, County Dublin, for the Balrothery Board of Assistance:—

*J. Clark, Rush £543

Wakefield.—58 houses at Flanshaw-lane. Mr. J. P. Firth, architect:—

*G. Crook & Son, Ltd.

Wallasey.—Cricket pavilion, in Claremount-road, for the Corporation. Mr. L. St. G. Wilkinson, Borough Surveyor:—

*W. Bradshaw, Wallasey £1,325

Wellingborough.—Offices in Midland-road, for the Industrial Co-operative Society, Ltd., Stroderoad. Mr. L. G. Ekins, F.R.I.B.A., architect, 99, Leman-street, London, E.C.:—

*Building Dept., Northampton Co-operative Society, Ltd., 64, Abingdon-street, Northampton.

West Kirby.—24 houses in Grainger-avenue, for the Hoylake and West Kirby Housing Society, Ltd.:—

*Bennett Bros., Hoylake.

Wolverhampton.—120 houses at Low Hill, for the T.C.:—

‡A. M. Griffiths & Son, Ltd., Wolverhampton £32,578

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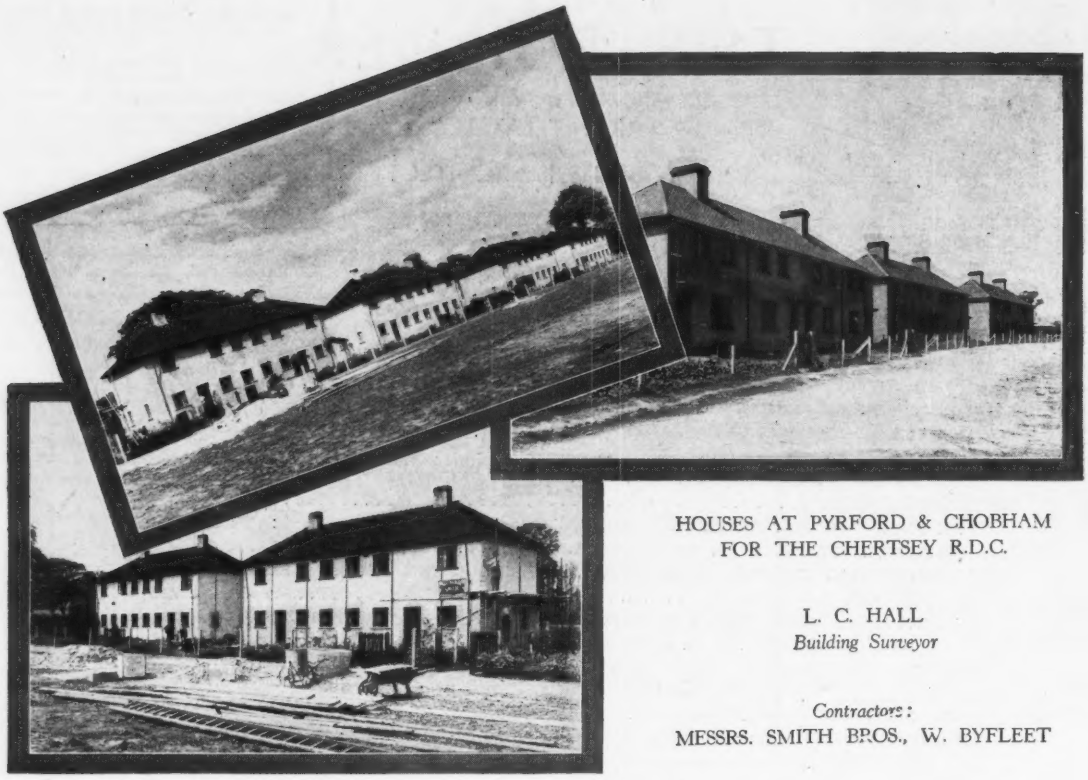

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FOR THE CHERTSEY R.D.C.

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